

San Bernardino County

**Reported Communicable Diseases
2006**



Department of Public Health

September 2007

Acknowledgments

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This report presents a summary of communicable diseases reported in San Bernardino County in 2006. The contents are divided into three sections:

Section 1. Reported Communicable Diseases in 2006.

Includes tables of reported communicable diseases by age group and by race/ethnicity and incidence of reported diseases preventable by immunization.

Section 2. Incidence Rates for Select Diseases by Primary Mode of Transmission.

Section 3. Special Disease Focus

- Botulism
- Kawasaki Syndrome in San Bernardino County
- Drug Resistant TB in San Bernardino County

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Comments regarding the report are welcome and may be addressed to:

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<http://www.sbcounty.gov>

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San Bernardino County Reported Communicable Diseases 2006

Introduction

The San Bernardino County Public Health Department is charged by California law and San Bernardino County Code with protection of the health of the County's over 2.0 million citizens. To fulfill this responsibility, the Department carries out a broad and comprehensive public health program which includes public health services mandated by the State of California, a substantial range of personal health services requested by the people and chosen as priority matters by the San Bernardino County Board of Supervisors, and a number of County-mandated regulatory services related to health.

Why Reporting of Communicable Disease is Important

Physicians and personnel in laboratories, schools, daycare centers and others are obligated by law to report certain communicable diseases to the local department of public health. Monitoring reports of communicable disease in a community allows public health to fulfill its mandate of protecting the health of its citizens. With timely morbidity reports, public health can evaluate the impact of a given disease and make appropriate recommendations to limit its further spread.

Delay or failure to report communicable diseases has contributed to serious outbreaks in the past. Failure to report can result in increased disease in the community, time lost from work or school, increased costs for diagnosis and treatment, hospitalization and possibly death.

When reporting does occur, removing persons from sensitive occupations, (e.g. food handlers), prevents the spread of diseases such as salmonellosis and hepatitis A. The early detection and appropriate treatment of patients with tuberculosis, the identification of asymptomatic carriers of typhoid and gonorrhea, the immunization of persons exposed to vaccine-preventable diseases and alerting healthcare providers about prevalent infections are just a few of the benefits derived by the entire community when reporting is timely and accurate.

Purpose of the Communicable Disease Report

The San Bernardino County Department of Public Health annual summary of communicable disease serves several functions. The report describes the extent and burden of various reported illnesses for the residents in this County. Where the impact of a certain disease in a particular group of individuals appears high, this information can be used to redirect disease control efforts. This report helps evaluate the effectiveness of County disease prevention and control programs by comparing San Bernardino County rates with those of California and the U.S. It represents an evolving effort by several disease control programs in the County. As the communicable disease concerns of our citizens change, the data collected and summarized in this report will also change.

Additional information concerning AIDS illnesses in this County is available in summary reports generated by the San Bernardino County Department of Public Health AIDS/STD Program, and can be obtained by calling the AIDS Program at (909) 383-3060.

San Bernardino County Reported Communicable Diseases 2006

How to Interpret This Report

This report contains epidemiological descriptions of reportable diseases as well as a five-year incidence of the disease stratified by race, ethnicity and age. The features of disease pages are described below.

San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Respiratory Secretions

Although many communicable diseases may be transmitted by more than one mechanism (i.e., hepatitis B), in this report they are categorized by *primary* mode of transmission.

Identified Tuberculosis (TB) strain, for Extreme Drug Resistance (XDR)-merged. In the United States, 4% of Multi-drug Resistant cases were XDR-TB.

- The 14,097 TB cases reported to CDC for 2005 represented a 2.9% decrease from 2004 and a 47% decrease from 1992, when the number of the case rate peaked during a in the United States.

proportion of total cases occurring gn-born was 55%, constituting a cases for the fourth consecutive

- From 2001 through 2005, the top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, Vietnam, India, and

Each selected disease is accompanied by a commentary section that includes general disease facts and local epidemiological insight.

Healthy People (HP) objectives are national health objectives created by The Centers for Disease Control and Prevention to identify the most significant preventable threats to health and to establish national goals to reduce these threats. Healthy People objectives are included for all reportable diseases in San Bernardino County for which an objective has been established.

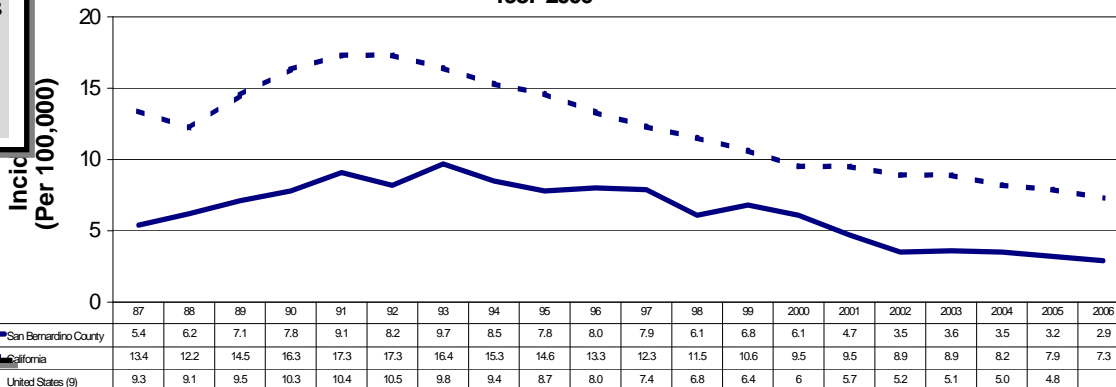
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Tuberculosis

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	7	9	7	6	4
Black	7	7	6	4	1
Hispanic	24	29	28	35	37
Asian	24	21	24	14	15
Native Am	0	0	0	0	0
Other / Not Specified	2	1	2	4	0
Age Group					
<1	0	0	1	0	2
1-4	1	1	1	4	1
5-9	0	2	1	0	1
10-14	1	1	0	0	1
15-19	1	4	2	5	1
20-24	6	3	3	2	1
25-29	7	0	8	5	4
30-34	6	4	7	3	4
35-39	8	6	7	4	7
40-44	1	7	5	6	2
45-54	7	13	14	12	7
55-64	11	12	6	7	6
≥65	15	14	12	15	21
Not Specified	0	0	0	0	0
Total	64	67	67	63	58

HP 2010 Objective: 1 case per 100,000 population

Incidence Rates for Tuberculosis in San Bernardino County, California and the United States, 1987-2006



San Bernardino County Reported Communicable Diseases 2006

Data Limitations

The obligation for health care professionals to report designated diseases and conditions to their local department of public health is mandated by Title 17, Sections 2500 and 2505 of the California Code of Regulations. The data presented in this report was tabulated from disease reports received from laboratories, hospitals, physicians, schools and other health providers throughout the county through the passive surveillance system established for reportable conditions. For this reason, a few major limitations must be acknowledged when interpreting these data.

First, the incidence of disease presented in this report under represents the true burden of disease in San Bernardino County. It is clear that not every reportable disease or condition is actually identified by or reported to the Department of Public Health. Individuals may not be ill enough to require medical care or the physician may not request testing of the patient at the time of the office visit. Diseases and conditions reportable only by physicians (see Appendix C) are significantly under reported. Illnesses that are a) fatal, b) require prophylaxis for prevention or c) are reportable by both laboratories and physicians are more likely to be reported.

Additionally, public health data may not reflect the true risk of exposure of county residents to a particular pathogen. Individuals identified as having a notifiable condition are reported by place of residence, not by place of exposure. Immigrants and other individuals who travel both domestically and abroad may acquire an unusual illness or other condition in the location of travel. These individuals are nevertheless counted in San Bernardino County if their address of residence is within the County. Conversely, residents who visit San Bernardino County may acquire an infection here and subsequently be reported by the health jurisdiction in which they permanently reside. County residents who are exposed to a communicable disease in another county where they work or socialize may unknowingly be part of a multi-county outbreak.

Section 1

Reported Communicable Diseases in 2006

Table 1: By Age Group

Table 2: By Race/Ethnicity

Table 3: Preventable by Immunization

Table 1. Reported Communicable Diseases by Age Group (in years), San Bernardino County, 2006

DISEASE NAME	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	65+	Unknown	Total
AIDS (1)	0	0	0	1	2	3	24	16	31	23	40	14	3	0	157
Amebiasis	0	0	0	0	1	0	0	0	0	1	0	1	0	0	3
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ascariasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, Infant	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Botulism, Wound	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
Brucellosis	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Campylobacteriosis	3	17	11	8	5	4	3	5	5	5	14	5	10	0	95
Chlamydia	10	0	2	75	2668	3058	1194	522	281	118	97	24	14	0	8063
Chlamydial PID (2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Cholera (3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coccidioidomycosis	0	0	0	0	1	3	1	1	4	3	8	7	4	0	32
Cryptococcosis	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4
Cryptosporidiosis	0	0	0	0	0	0	1	1	0	1	0	1	0	0	4
Cysticercosis	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Dengue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Encephalitis, Viral	0	0	1	3	1	0	1	0	1	1	1	1	2	0	12
<i>Escherichia coli</i> O157:H7	0	4	0	1	0	0	1	0	0	0	0	1	0	0	7
Giardiasis	1	9	10	5	0	1	1	4	2	6	9	9	3	0	60
Gonorrhea, Total (4)	1	2	4	17	563	692	361	195	140	66	58	13	2	0	2114
Gonococcal PID (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus Influenzae Invasive (5)	0	0	0	0	0	0	0	0	0	0	1	2	2	0	5
Hantavirus Pulmonary Syndrome	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hemolytic Uremic Syndrome	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hepatitis A	0	1	0	2	3	3	1	1	1	0	9	3	2	0	26
Hepatitis B, (Acute)	0	0	0	0	0	0	2	2	2	0	4	1	0	0	11
Hepatitis B, (Chronic)	1	1	0	0	14	35	64	93	60	55	89	39	28	0	479
Hepatitis C, (Acute)	0	0	0	0	0	1	0	1	0	0	2	0	0	0	4
Hepatitis C, (Chronic) (6)	8	3	6	5	25	51	88	128	196	426	1140	543	221	0	2840
Hepatitis D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIV (18)	0	0	0	0	7	19	31	37	26	29	37	6	2	0	194
Influenza (Types A and B)	6	8	8	8	9	2	9	4	7	5	8	5	3	0	82
Kawasaki Syndrome	2	7	1	1	0	0	0	0	0	0	0	0	0	0	11
Legionellosis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Leprosy (Hansen's Disease)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	0	0	0	0	0	0	0	0	1	0	1	1	1	0	4
Lyme Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malaria	0	0	0	0	2	2	0	0	1	0	1	0	2	0	8
Measles (Rubeola)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningitis, Bacterial (7)	4	2	0	0	1	0	0	0	1	1	2	2	1	0	14

Table 1. Reported Communicable Diseases by Age Group (in years), San Bernardino County, 2006

DISEASE NAME	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	65+	Unknown	Total
Meningitis, Fungal	0	0	0	1	0	0	1	1	1	2	1	1	0	0	8
Meningitis, Viral	12	1	1	7	7	4	14	5	3	4	6	5	4	0	73
Meningococcal Disease (8)	1	1	0	1	2	0	0	0	0	0	1	1	0	0	7
Mumps	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Non-Gonococcal Urethritis	0	0	0	0	1	4	2	1	0	1	4	1	0	0	14
Pelvic Inflammatory Disease (2)	0	0	0	0	9	17	8	13	5	2	2	0	0	0	56
Pertussis (Whooping Cough)	4	1	2	2	1	0	0	3	0	0	0	0	0	0	13
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q-Fever	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Rabies, Human	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella (German Measles)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella Syndrome, Congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	25	40	31	12	18	15	10	9	9	10	23	18	21	0	241
SARS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis, Total	0	14	10	3	2	3	1	4	1	1	3	3	1	0	46
Group A (S. dysenteriae)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Group B (S. flexneri)	0	4	1	0	1	1	0	2	0	0	0	1	0	0	10
Group C (S. boydii)	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3
Group D (S. sonnei)	0	9	9	3	1	2	0	2	0	0	3	1	0	0	30
Group Unknown	0	1	0	0	0	0	1	0	0	1	0	0	0	0	3
Strongyloidiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syphilis, Total	0	0	0	1	5	10	18	14	20	27	30	16	3	0	144
Primary	0	0	0	0	0	2	0	0	1	2	1	1	0	0	7
Secondary	0	0	0	0	1	1	3	1	4	2	4	3	0	0	19
Early Latent (<1 yr)	0	0	0	0	2	2	0	1	0	2	2	1	0	0	10
Late Latent/Late (>1 yr)	0	0	0	1	2	5	15	12	15	21	23	11	3	0	108
Congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	2	1	1	1	1	1	4	4	7	2	7	6	21	0	58
Tularemia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid Fever, (Acute)	0	1	0	1	0	0	1	0	0	0	0	0	1	0	4
Typhoid Fever, (Carrier)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vibrio Infections (3)	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
West Nile Virus	0	0	0	1	0	0	0	1	0	0	0	1	0	0	3
Yellow Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yersiniosis	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2

See Appendices F and G for Notes and Sources for Table 1

Table 2. Reported Communicable Diseases by Race/Ethnicity, San Bernardino County, 2006

	White	Black	Hispanic	Asian	Native American	Other	Unknown	Total
AIDS (1)	49	51	53	4	0	0	0	157
Amebiasis	2	0	1	0	0	0	0	3
Anthrax	0	0	0	0	0	0	0	0
Ascariasis	0	0	0	0	0	0	0	0
Botulism, Infant	2	0	3	0	0	1	0	6
Botulism, Wound	1	0	2	0	0	0	0	3
Brucellosis	0	0	2	0	0	0	0	2
Campylobacteriosis	33	2	44	8	0	0	8	95
Chlamydia	758	1041	1842	95	15	4	4308	8063
Chlamydial PID (2)	0	0	0	0	0	0	0	0
Cholera (3)	0	0	0	0	0	0	0	0
Coccidioidomycosis	13	3	11	2	0	0	3	32
Cryptococcosis	0	2	1	0	0	0	1	4
Cryptosporidiosis	1	1	2	0	0	0	0	4
Cysticercosis	0	0	4	0	0	0	0	4
Dengue	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0
Encephalitis, Viral	3	0	7	2	0	0	0	12
<i>Escherichia coli</i> O157:H7	2	2	3	0	0	0	3	7
Giardiasis	27	1	26	1	0	1	4	60
Gonorrhea, Total (4)	212	435	360	11	4	1	1091	2114
Gonococcal PID (2)	0	0	0	0	0	0	0	0
Haemophilus Influenzae Invasive (5)	2	1	1	0	0	1	0	5
Hantavirus Pulmonary Syndrome	1	0	0	0	0	0	0	1
Hemolytic Uremic Syndrome	1	0	0	0	0	0	0	1
Hepatitis A	8	3	11	1	0	0	3	26
Hepatitis B, (Acute)	3	3	1	2	0	0	2	11
Hepatitis B, (Carrier)	60	37	48	175	1	5	153	479
Hepatitis C, (Acute)	2	1	1	0	0	0	0	4
Hepatitis C, (Chronic) (6)	369	116	283	20	5	1	2046	2840
Hepatitis D	0	0	0	0	0	0	0	0
HIV (18)	58	58	63	4	1	2	8	194
Influenza (Types A and B)	10	4	11	2	0	0	55	82
Kawasaki Syndrome	2	0	8	1	0	0	0	11
Legionellosis	0	0	1	0	0	0	0	1
Leprosy (Hansen's Disease)	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0	0	0
Listeriosis	1	0	3	0	0	0	0	4
Lyme Disease	0	0	0	0	0	0	0	0
Malaria	2	5	0	1	0	0	0	8
Measles (Rubeola)	0	0	0	0	0	0	0	0
Meningitis, Bacterial (7)	6	1	5	0	0	1	1	14

Table 2. Reported Communicable Diseases by Race/Ethnicity, San Bernardino County, 2006

	White	Black	Hispanic	Asian	Native American	Other	Unknown	Total
Meningitis, Fungal	0	1	6	0	0	0	1	8
Meningitis, Viral	26	5	35	1	0	1	5	73
Meningococcal Disease (8)	1	1	4	0	0	0	1	7
Mumps	0	0	0	1	0	0	0	1
Non-Gonococcal Urethritis	1	7	6	0	0	0	0	14
Pelvic Inflammatory Disease (2)	12	10	23	0	0	0	11	56
Pertussis (Whooping Cough)	6	0	6	0	0	0	1	13
Plague	0	0	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0	0	0
Q-Fever	0	0	1	0	0	0	0	1
Rabies, Human	0	0	0	0	0	0	0	0
Rubella (German Measles)	0	0	0	0	0	0	0	0
Rubella Syndrome, Congenital	0	0	0	0	0	0	0	0
Salmonellosis	108	11	86	7	2	0	27	241
SARS	0	0	0	0	0	0	0	0
Shigellosis, Total	10	2	29	1	0	0	4	46
Group A (S. dysenteriae)	0	0	0	0	0	0	0	0
Group B (S. flexneri)	0	0	8	1	0	0	1	10
Group C (S. boydii)	2	0	0	0	0	0	1	3
Group D (S. sonnei)	7	2	19	0	0	0	2	30
Group Unknown	1	0	2	0	0	0	0	3
Strongyloidiasis	0	0	0	0	0	0	0	0
Syphilis, Total	18	34	70	2	0	1	19	144
Primary	1	2	2	0	0	0	2	7
Secondary	4	4	8	1	0	0	2	19
Early Latent (<1 yr)	1	4	5	0	0	0	0	10
Late Latent/Late (>1 yr)	12	24	55	1	0	1	15	108
Neurosyphilis	0	0	0	0	0	0	0	0
Congenital	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0	0	0
Tuberculosis	4	1	37	15	0	1	0	58
Tularemia	0	0	0	0	0	0	0	0
Typhoid Fever, (Acute)	0	0	1	1	0	2	0	4
Typhoid Fever, (Carrier)	0	0	0	0	0	0	0	0
Vibrio Infections (3)	0	0	2	0	0	0	0	2
West Nile Virus	2	0	1	0	0	0	0	3
Yellow Fever	0	0	0	0	0	0	0	0
Yersiniosis	1	1	0	0	0	0	0	2

See Appendices F and G for Notes and Sources for Table 2

**Table 3. Reported Cases of Diseases Preventable by Immunization
San Bernardino County, 2004-2006**

Disease	Reported Cases					
	All Ages			Children <5 Years		
	2004	2005	2006	2004	2005	2006
Congenital Rubella Syndrome	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
Haemophilus influenzae*	5	10	5	2	4	0
Hepatitis A	32	41	26	1	1	1
Hepatitis B (acute)	21	9	11	0	0	0
Hepatitis B Carrier	409	381	479	1	1	2
Measles (Rubeola)	0	0	0	0	0	0
Meningococcal Infection*	9	7	7	1	2	2
Mumps	2	2	1	1	0	0
Pertussis	30	33	13	20	21	5
Poliomyelitis, paralytic	0	0	0	0	0	0
Rubella	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0

* Includes both Meningitis and Sepsis

Section 2

Incidence Rates, 10 to 20 years

Graphs of incidence and rate per 100,000 population of selected reportable diseases.

Hepatitis B, Acute

- Since 1997, the number of acute hepatitis B cases in San Bernardino County has declined ~74% to 0.6 per 100,000 persons; the U.S. rate reported in 2005 was 1.8 per 100,000 persons. The steady decline coincides with the implementation of a national strategy to achieve the elimination of hepatitis B.
- In 2005, rates of infection among U.S. children aged <13 years, the cohort born since routine infant vaccination was implemented, was 0.02 per 100,000 population, a 98% decline since 1990.
- Hepatitis B virus (HBV) is a global health problem with an estimated 350 million HBV carriers including 500,000 deaths each year. Chronic HBV infection is endemic in most areas in sub-Saharan Africa, Southeast Asia, China, and Alaska, with carrier rates of 8% to 20%.
- HBV is transmitted via cutaneous or mucosal exposure to infected blood or other bodily fluids. In the U.S., hepatitis B infections occur mostly in individuals who share needles and syringes, as well as through multiple sex partners.
- The highest rates among children continue to be among Asian/Pacific Islanders (APIs), followed by Blacks, American Indians/Alaska Natives, and Whites.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	13	9	0	2	3
Black	4	8	7	2	3
Hispanic	4	3	9	3	1
Asian	1	0	0	0	2
Native Am	1	0	0	0	0
Other /					0
Not Specified	8	4	5	2	2
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	1	0	0	0	0
15-19	0	1	0	1	0
20-24	2	2	1	4	0
25-29	4	1	4	1	2
30-34	3	5	7	0	2
35-39	8	3	1	2	2
40-44	1	5	4	1	0
45-54	5	2	3	0	4
55-64	4	3	1	0	1
≥65	3	2	0	0	0
Not Specified	0	0	0	0	0
Total	31	24	21	9	11

Incidence Rates for Hepatitis B, Acute in San Bernardino County, California, and the United States, 1997-2006



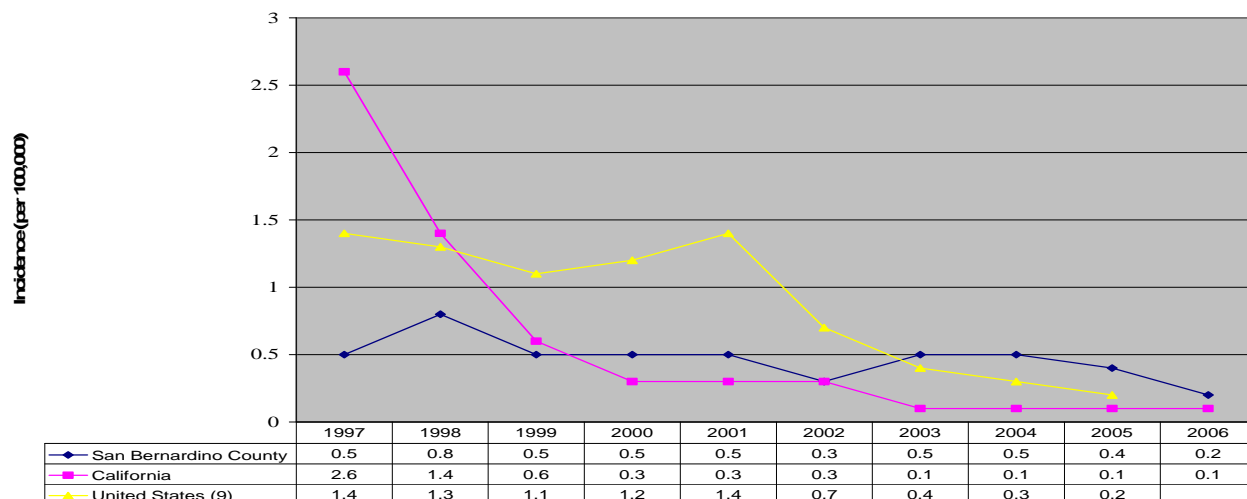
Hepatitis C, Acute

- Individuals with hepatitis C may have malaise, nausea, and upper right quadrant pain, dark urine and jaundice or may be asymptomatic.
- The incidence of acute hepatitis C is decreasing in the U.S. San Bernardino County reported a 50% decrease in new cases since 1996 resulting in a rate of 0.2 per 100,000 persons, well below the Healthy People 2010 goals.
- At the present, the majority of cases of hepatitis C infections result from parenteral exposure via injection drug use.
- Hepatitis C is less efficiently transmitted by sex. This may be due to lower levels of hepatitis C virus in seminal or vaginal fluids.
- It is estimated that 170 million individuals in the world are infected with hepatitis C virus (HCV) as of 2004.
- In the U.S, HCV infections are now the leading cause of liver transplantation in most transplant centers. This is due to the propensity of HCV infections to cause chronic liver disease, cirrhosis, and eventually hepatocellular carcinoma, or primary liver cancer.
- The incidence of new acute infections is highest in individuals within the age group 20-39 years of age, predominantly in Hispanic males.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	4	2	0	2	2
Black	0	0	0	0	1
Hispanic	3	3	4	2	1
Asian	0	0	0	0	0
Native Am	0	0	0	0	0
Other /					
Not Specified	2	1	5	3	0
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	0	0	0	0
15-19	0	0	0	0	0
20-24	0	0	0	1	1
25-29	0	1	0	0	0
30-34	2	3	0	1	1
35-39	2	1	4	1	0
40-44	3	0	2	1	0
45-54	1	1	3	1	2
55-64	0	0	0	2	0
≥65	1	0	0	0	0
Not Specified	0	0	0	0	0
Total	9	6	9	7	4

HP 2010 Objective: 1 case per 100,000 population
San Bernardino County: 0.2 cases per 100,000 population

Incidence Rates for Hepatitis C, Acute in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

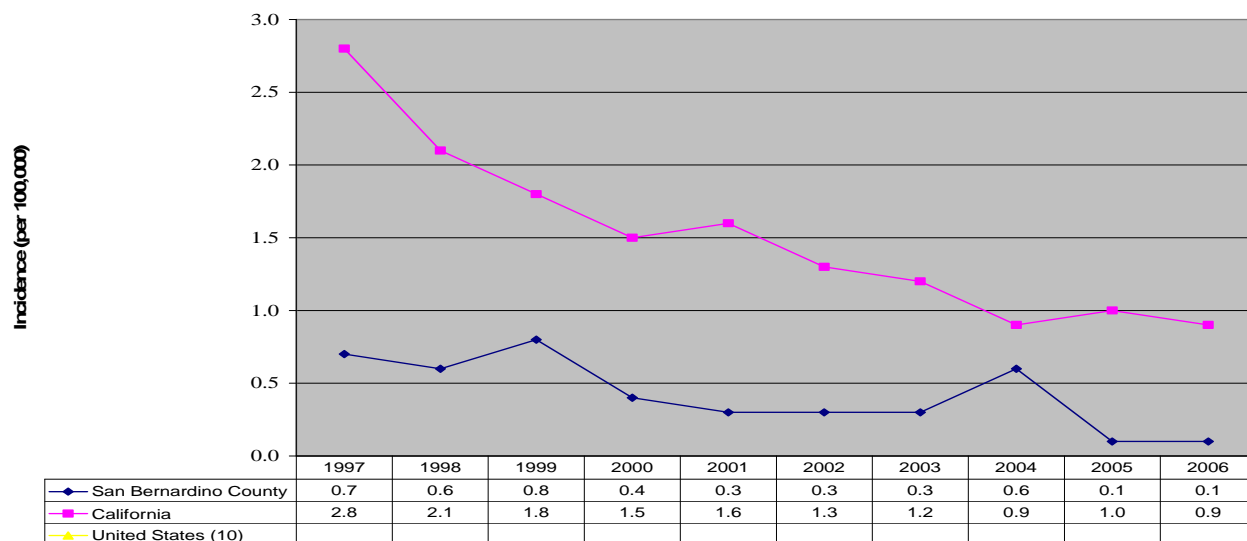
Diseases Transmitted by Fecal-Oral Route

Amebiasis

- *Entamoeba histolytica* is a single-celled parasite causing amebiasis, a gastrointestinal infection that can also spread throughout the body, when cysts are ingested.
- In developing countries and where poor sanitation exists, estimates of worldwide deaths due to amebiasis infections range from 40,000 to 100,000 persons annually, making it the second leading cause of death from parasitic diseases, with malaria being the first.
- In the United States, amebiasis is most common among institutionalized persons and those who have anal intercourse. The frequency of amebiasis is greater in areas of lower socioeconomic status, rural areas, and mental institutions where fecal-oral pathogens may spread.
- Two morphologically identical *Entamoeba* species exist: *E. histolytica* and *E. dispar*. The former is responsible for invasive amebiasis, while the latter is a gut commensal, does not cause illness, and does not need treatment.
- Asymptomatic carriers of amoebic cysts occur in 1%-5% of the southern U.S. population.

	San Bernardino County				
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	2	1	3	1	2
Black	0	0	1	0	0
Hispanic	2	0	6	0	1
Asian	1	2	0	1	0
Native Am	0	0	0	0	0
Other /					0
Not Specified	1	2	2	0	0
Age Group					
<1	0	0	0	0	0
1-4	2	0	1	0	0
5-9	0	1	0	0	0
10-14	1	1	1	0	0
15-19	1	0	0	0	1
20-24	0	1	0	0	0
25-29	0	0	0	1	0
30-34	0	0	2	1	0
35-39	0	0	0	0	0
40-44	0	0	1	0	1
45-54	1	2	3	0	0
55-64	0	0	1	0	1
≥65	1	0	3	0	0
Not Specified	0	0	0	0	0
Total	6	5	12	2	3

Incidence Rates for Amoebiasis in San Bernardino County, California, and the United States, 1997 -2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Fecal-Oral Route

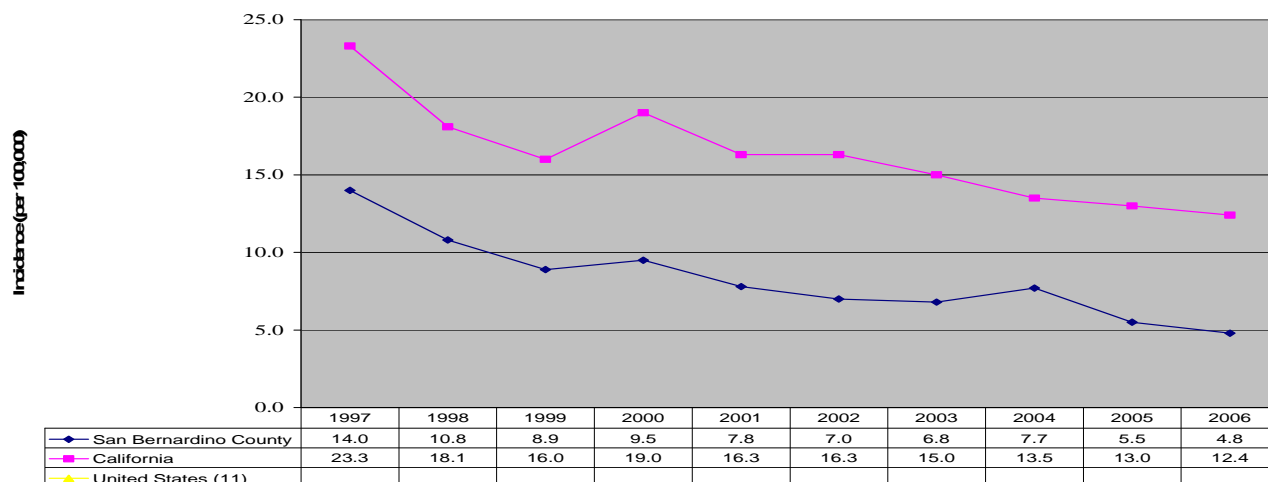
Campylobacteriosis

- San Bernardino County saw a 66% decline in the rate of infections due to *Campylobacter* from 1997 to 2006. *Campylobacter* is among the most common bacterial infections of humans in all parts of the world, causing both diarrheal and systemic illnesses.
- This disease is a worldwide zoonosis, and is commonly found commensally in domesticated livestock, including sheep, cattle, swine, and goats, as well as in dogs, cats, rodents, and all varieties of fowl.
- There are more than two million *Campylobacter* infections in the U.S. annually, with population-based studies showing peak incidence in children <1 year of age and in persons 15-29 years of age, though cases have been reported in persons of all ages.
- Consumption of undercooked poultry is estimated to be responsible for approximately 50% to 70% of sporadic *Campylobacter* infections in developed countries.
- In 1983, backpackers in the Rocky Mountains in Wyoming who drank untreated waters were found to develop campylobacteriosis three times more commonly than giardiasis.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	44	28	25	38	33
Black	7	2	3	4	2
Hispanic	51	51	58	44	44
Asian	3	1	5	2	8
Native Am	1	0	1	0	0
Other /					0
Not Specified	32	45	55	18	8
Age Group					
<1	8	6	3	2	3
1-4	29	25	25	17	17
5-9	17	16	14	12	11
10-14	14	12	8	8	8
15-19	6	10	4	6	5
20-24	10	6	6	3	4
25-29	2	2	9	6	3
30-34	3	5	10	6	5
35-39	4	5	13	5	5
40-44	9	11	15	6	5
45-54	19	14	18	13	14
55-64	10	5	9	12	5
≥65	7	10	13	10	10
Not Specified	0	0	0	0	0
Total	138	127	147	106	95

HP 2010 Objective: 12.3 cases per 100,000 population
San Bernardino County: 4.8 cases per 100,000 population

Incidence Rates for Campylobacteriosis in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Fecal-Oral Route

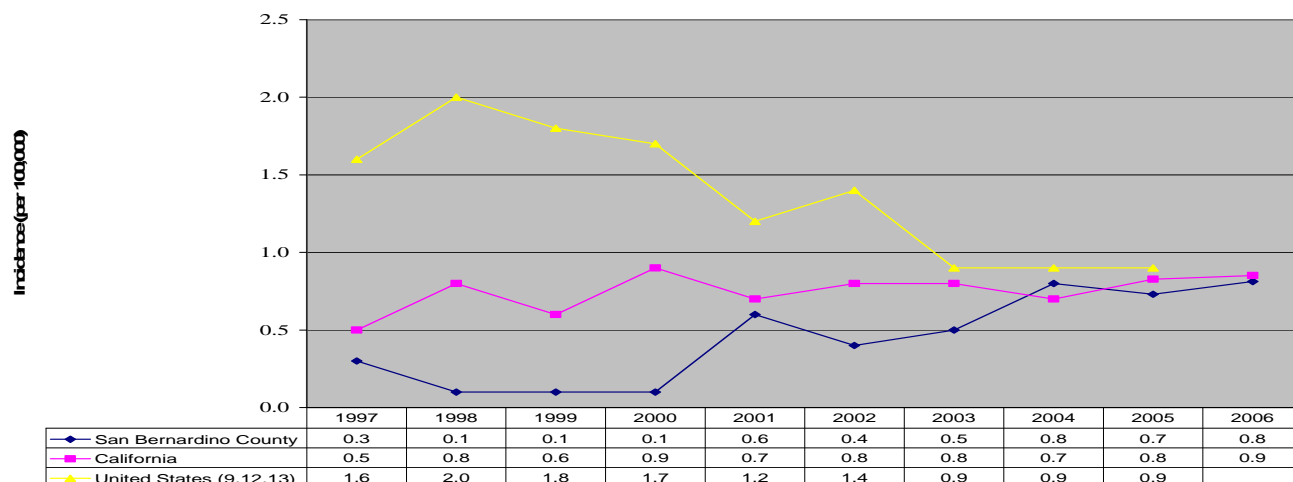
E. coli O157:H7 Infection

- Associated with eating undercooked, contaminated ground beef, people also become ill from eating contaminated bean sprouts or fresh leafy vegetables such as lettuce and spinach. The bacteria cause bloody diarrhea and the potentially fatal type of kidney failure called Hemolytic Uremic Syndrome (HUS).
- *Escherichia coli* O157:H7 is a leading cause of foodborne illness. Based on a 1999 estimate, 73,000 cases of infection and 61 deaths occur in the United States each year
- Cattle are the major reservoir of this organism; however, infection can be prevented by thoroughly cooking ground beef, avoiding unpasteurized milk, and by washing hands carefully before preparing or eating food.
- The Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report in October 2006 stated that 199 persons infected with the outbreak strain of *E. coli* O157:H7 were reported to CDC from 26 states. Of the 199 ill persons, 102 (51%) were hospitalized and 31 (16%) developed HUS. Three deaths in confirmed cases were associated with the outbreak.
- HUS may occur 2-4 days after the onset of diarrhea, especially in children <5 years of age and older adults.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	4	6	8	1	2
Black	1	0	0	0	2
Hispanic	3	1	4	1	3
Asian	1	0	0	0	0
Native Am	0	0	0	0	0
Other /					0
Not Specified	1	1	4	1	0
Age Group					
<1	0	0	2	0	0
1-4	6	1	9	1	4
5-9	1	2	1	0	0
10-14	0	0	1	0	1
15-19	0	2	0	1	0
20-24	0	0	0	0	0
25-29	0	0	0	0	1
30-34	0	0	1	0	0
35-39	0	0	0	1	0
40-44	2	0	1	0	0
45-54	0	2	0	0	0
55-64	1	0	1	0	1
≥65	0	1	0	0	0
Not Specified	0	0	0	0	0
Total	10	8	16	3	7

HP 2010 Objective: 1 case per 100,000 population
San Bernardino County: 0.8 cases per 100,000 population

Incidence Rates for *E. Coli* O157:H7 in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

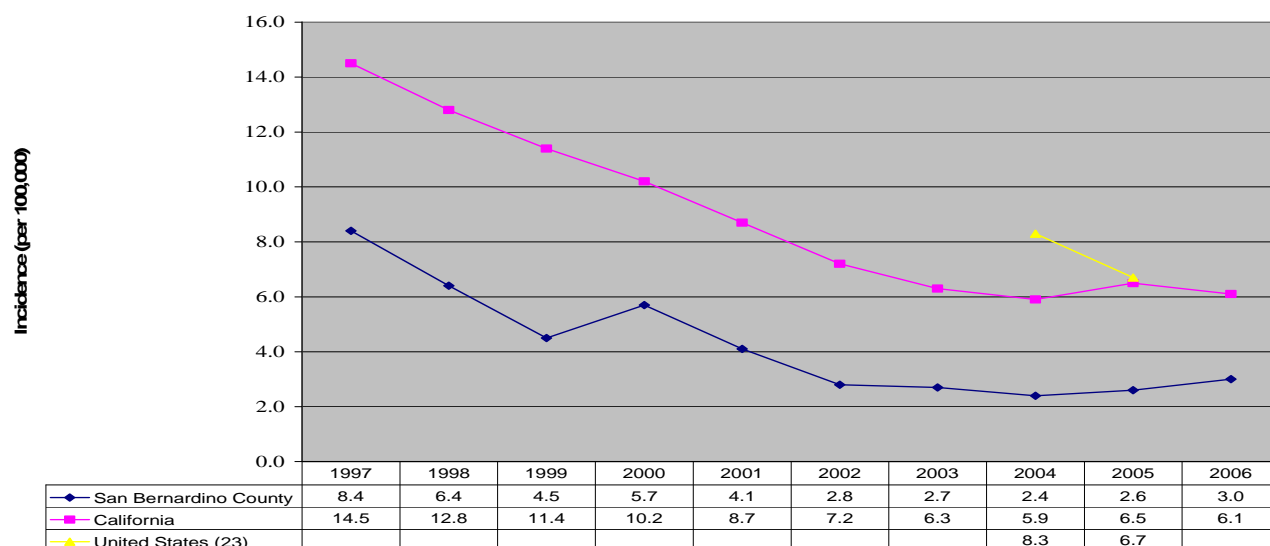
Diseases Transmitted by Fecal-Oral Route

Giardiasis

- This is a diarrheal illness caused by a one-celled, microscopic parasite, *Giardia lamblia*. In the U.S., *G. lamblia* has been found in 4%-7% of stool samples, and is the most commonly identified intestinal parasite.
- The prevalence of *G. lamblia* in stool specimens submitted for examination ranges from 2% to 5% in industrialized countries and from 20% to 30% in developing countries, and it can be as high as 35% among children attending daycare centers in the U.S. in a non-outbreak setting. There can be as many as 100,000 to 2.5 million cases of *Giardia* infection annually.
- Giardia* infection has become one of the most common causes of waterborne disease (found in both drinking and recreational water). It is acquired through ingestion of the cysts, in contaminated water, or from person-to-person contact, as well as through contaminated foods.
- Giardia* infection is usually not fatal; of 100 persons who have ingested *Giardia* cysts, 35% to 70% will have no symptoms.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	26	13	9	20	27
Black	2	5	5	6	1
Hispanic	34	15	14	14	26
Asian	2	1	0	3	1
Native Am	0	0	0	0	0
Other /		1			1
Not Specified	8	16	18	7	4
Age Group					
<1	0	0	1	0	1
1-4	21	3	7	13	9
5-9	13	9	4	4	10
10-14	6	5	8	3	5
15-19	4	1	1	1	0
20-24	1	1	2	2	1
25-29	2	3	1	3	1
30-34	3	1	0	1	4
35-39	7	7	5	5	2
40-44	6	2	2	4	6
45-54	2	12	7	6	9
55-64	4	2	5	7	9
≥65	3	5	3	1	3
Not Specified	0	0	0		
Total	72	51	46	50	60

Incidence Rates for Giardiasis in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

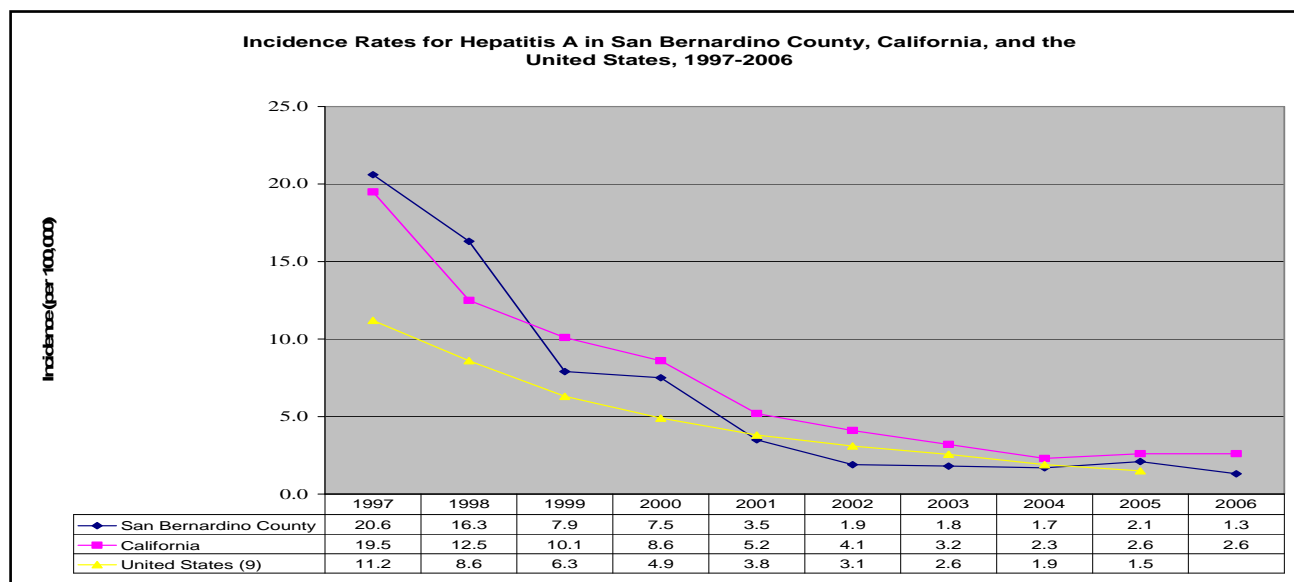
Diseases Transmitted by Fecal-Oral Route

Hepatitis A

- Hepatitis A (HAV) virus affects the liver. It is an acute, self-limiting disease that can range from severe to inapparent symptoms, and rarely results in death. Infections are spread through direct person-to-person contact either by the oral-fecal route or ingestion of contaminated foods or water.
- Full recovery from hepatitis A leads to lifelong immunity from reinfection. The existence of a hepatitis A vaccine can be attributed to helping decrease the number of cases.
- San Bernardino county has seen a 94% decrease in the rate of infections from hepatitis A from 1997 to 2006. From 1980 to 2005 the incidence of hepatitis A in the United States decreased from 234,000 to 42,000 persons. California had an average reported incidence of 20.26 cases per 100,000 persons between the years of 1986 to 1997.
- As of 2005, the highest U.S. rates of hepatitis A occurred among Native American/Alaskan Natives (121.2 per 100,000), and the lowest rates were among Asians (4.6 per 100,000). Rates are most likely reflective of different risk factors.
- The most frequent mode of infection reported by the CDC in 1999-2000 involved person-to-person contact. Hepatitis A is highly contagious with secondary attack rates of 15% to 20%, spreading rapidly in individuals in prolonged close contact, such as institutions, and army camps.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	14	18	9	10	8
Black	2	0	1	1	3
Hispanic	40	10	16	20	11
Asian	2	0	2	3	1
Native Am	0	0	0	0	0
Other /					0
Not Specified	5	6	15	7	3
Age Group					
<1	0	0	0	0	0
1-4	3	0	1	1	1
5-9	10	5	5	1	0
10-14	14	7	9	3	2
15-19	9	3	9	7	3
20-24	5	2	0	8	3
25-29	3	2	3	4	1
30-34	4	2	2	2	1
35-39	3	0	6	0	1
40-44	3	1	0	2	0
45-54	4	4	5	10	9
55-64	3	6	1	2	3
≥65	2	2	2	1	2
Not Specified	0	0	0	0	
Total	63	34	32	41	26

HP 2010 Objective: 4.5 cases per 100,000 population
San Bernardino County: 1.3 cases per 100,000 population



San Bernardino County Reported Communicable Diseases 2006

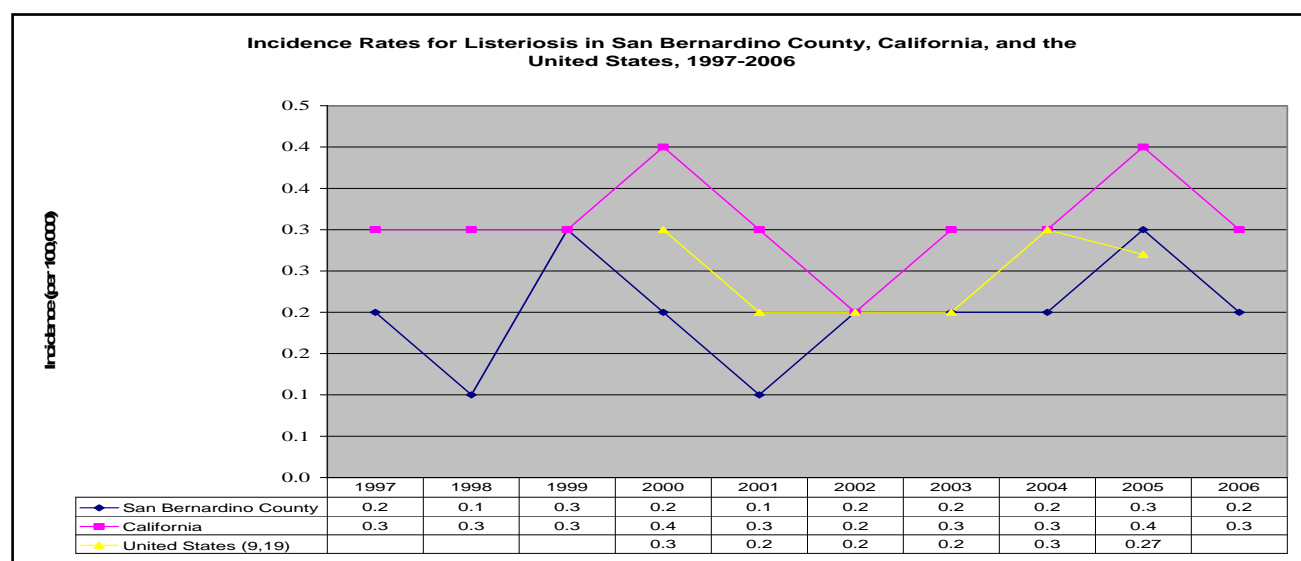
Diseases Transmitted by Fecal-Oral Route

Listeriosis

- Listeriosis is a disease caused by the bacteria *Listeria monocytogenes* that infects people who eat contaminated food. It is a zoonotic disease of herd animals, widespread in nature, commonly found in soil, decaying vegetation, water, and part of the fecal flora of many mammals.
- L. monocytogenes* has been associated with raw milk and dairy products, cheeses (particularly soft-ripened varieties), ice cream, raw vegetables, fermented raw-meat sausages, raw and cooked poultry, raw meats (all types), and raw and smoked fish. Its ability to grow at temperatures as low as 3°C (37°F) permits multiplication in refrigerated foods.
- Two Centers for Disease Control and Prevention surveillance reports, from 1980-1982 and in 1986, indicated annual infection rates of 7.4 per million. An estimated 2,500 persons become seriously ill with listeriosis each year - of these, 500 die. In 1993, new food regulations were implemented, and the annual incidence declined to 4.4 per million, or 1092 cases per year with 248 deaths.
- Pregnant women are 20 times more likely than healthy people to get listeriosis, and 1/3 of all cases occur in pregnancy. Other susceptible persons include those with weakened immune systems, those with AIDS, cancer, diabetes, and kidney disease. In addition people on glucocorticoids and the elderly may also be at higher risk. The highest infection rates in the U.S. are seen in infants <1 month old and adults >60 years of age.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	1	1	0	2	1
Black	0	0	1	0	0
Hispanic	0	0	1	3	3
Asian	0	2	0	0	0
Native Am	0	0	0	0	0
Other /					0
Not Specified	1	0	2	1	0
Age Group					
<1	0	1	1	1	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	0	0	0	0
15-19	0	0	0	0	0
20-24	0	0	0	1	0
25-29	0	1	2	0	0
30-34	1	0	0	1	0
35-39	0	0	0	0	1
40-44	0	0	1	0	0
45-54	1	0	0	0	1
55-64	0	0	0	2	1
≥65	0	1	0	1	1
Not Specified	0	0	0	0	0
Total	2	3	4	6	4

HP 2010 Objective: 0.25 cases per 100,000 population
San Bernardino County: 0.2 cases per 100,000 population



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Fecal-Oral Route

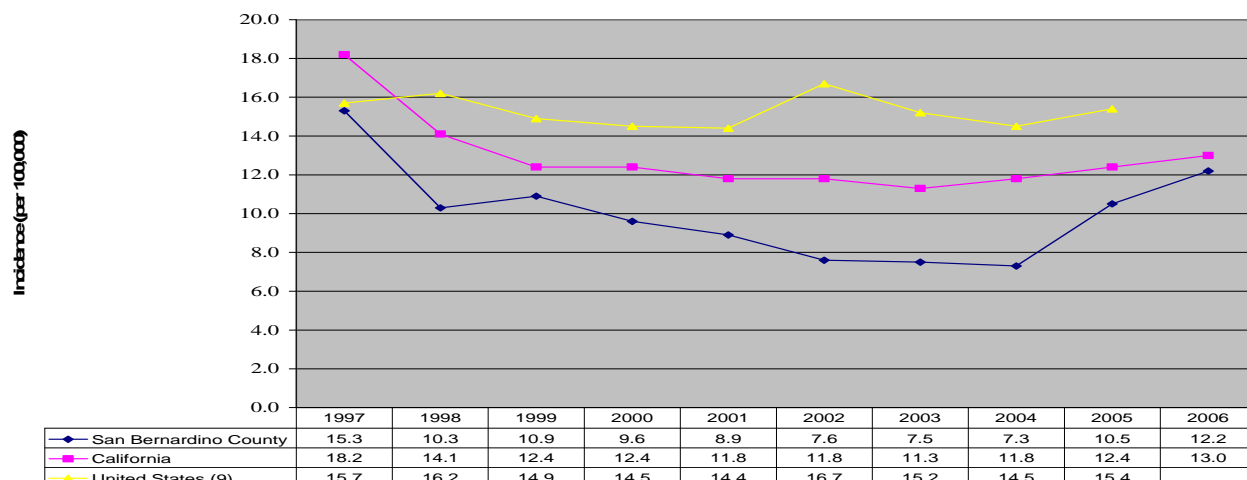
Salmonellosis

- Salmonella is a group of bacteria that cause an illness called salmonellosis. Persons infected with *Salmonella* often develop diarrhea, fever, and abdominal cramps 12 to 72 hours after infection.
- Salmonellae are microscopic organisms that pass between the feces of infected people or animals, to uninfected persons or animals.
- Infections usually resolve in a week and are not usually treated unless the patient becomes severely dehydrated or the infection spreads from the intestines.
- In the U.S., the incidence rate of non-typhoidal salmonellosis infection has doubled within the last two decades, with 1.4 million cases estimated to occur annually.
- Salmonellosis in humans is often associated with inadequately cooked food products of animal origin. Foods such as poultry and meat, and unpasteurized milk are the most frequently identified source of foodborne disease outbreaks.
- Cross contamination of foods can also occur when persons transfer the bacteria from unwashed hands after handling affected foods or certain animals (i.e. reptiles and turtles) that harbor the bacteria.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	56	46	41	63	108
Black	12	8	6	11	11
Hispanic	64	52	54	69	86
Asian	1	5	4	14	7
Native Am	0	1	1	0	2
Other /					0
Not Specified	24	26	34	46	27
Age Group					
<1	20	15	10	31	25
1-4	27	26	21	34	40
5-9	19	16	9	24	31
10-14	8	10	15	13	12
15-19	5	6	7	9	18
20-24	7	9	9	11	15
25-29	6	2	7	7	10
30-34	6	9	4	8	9
35-39	12	3	8	6	9
40-44	11	10	9	11	10
45-54	16	15	21	20	23
55-64	5	13	12	10	18
≥65	15	4	8	19	21
Not Specified	0	0	0	0	0
Total	157	138	140	203	241

HP 2010 Objective: 6.8 cases per 100,000 population
San Bernardino County: 12.2 per 100,000 population

Incidence Rates for Salmonellosis in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Fecal-Oral Route

Shigellosis

- Shigella is a family of bacteria that cause shigellosis, generally a summertime illness characteristically seen among children living in crowded areas with inadequate sanitation and limited water.
- Fecal to oral ingestion of contaminated food and water are the primary means of shigellosis infection in developing countries. Thus, infected persons should avoid handling food and water until they can show that they are no longer infected.
- Shigellosis is endemic throughout the world, an estimated 163.2 million infections occur in developing countries and 1.5 million in industrialized countries.
- Each year 1.1 million people are estimated to die from *Shigella* infection and 580,000 cases are reported in travelers from industrialized countries. A total of 69% of all episodes and 61% of all deaths attributable to shigellosis involve children less than 5 years of age. Of the 4 types of *Shigella*, *S. sonnei* species accounts for >75% of U.S. infections.
- Shigellosis has become a particularly important problem amongst daycare centers for preschool children.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	21	8	18	9	10
Black	1	4	4	1	2
Hispanic	28	47	40	26	29
Asian	1	2	2	1	1
Native Am	0	0	1	1	0
Other /					0
Not Specified	7	15	35	5	4
Age Group					
<1	0	1	4	1	0
1-4	17	21	26	10	14
5-9	14	30	26	8	10
10-14	4	6	13	4	3
15-19	2	3	7	5	2
20-24	4	3	4	3	3
25-29	3	1	2	4	1
30-34	1	1	2	2	4
35-39	1	3	3	0	1
40-44	1	3	4	1	1
45-54	3	4	7	1	3
55-64	3	0	1	2	3
≥65	5	0	1	2	1
Not Specified	0	0	0	0	
Total	58	76	100	43	46

Incidence Rates for Shigellosis in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Sexual Contact

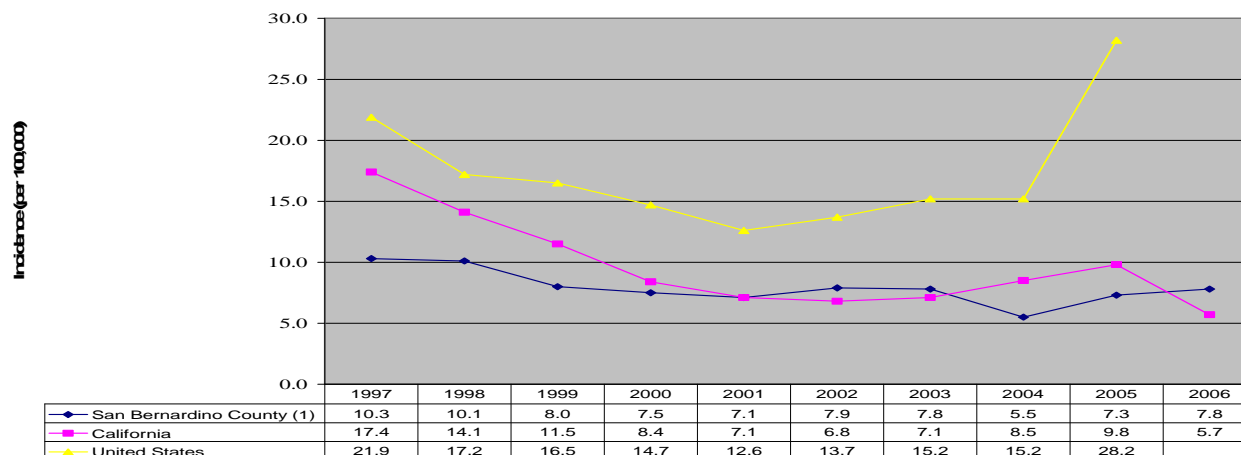
AIDS

- Infection with HIV is the major public health crisis worldwide. As of 2005 over 25 million persons dead and over 50 million known currently living with the disease, many of which have inadequate access to medical care.
- The major mode of transmission is through sexual contact of the genital or colonic mucosa. Other modes of transmission include contact with infected blood or blood products, mother-to-infant, and less commonly, accidental occupational exposure, including needlesticks.
- AIDS became recognized in the United States in 1981, and since then, confidential name-based HIV surveillance has become the cornerstone of national, state, and local efforts to monitor the scope and impact of this pandemic.
- Individuals infected with STIs are 3 times more likely to contract HIV, as diseases such as gonorrhea and syphilis cause lesions and facilitate HIV infection.
- Nationally, injection drug use is the second leading cause of HIV transmission among Black women and the third leading cause of transmission among Black men.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	61	43	31	38	49
Black	37	46	29	45	51
Hispanic	57	50	41	54	53
Asian	2	6	3	1	4
Native Am	0	0	1	1	0
Other /					
Not Specified	3	0	0	2	0
Age Group					
<1	0	0	0	0	0
1-4	0	0	2	0	0
5-9	0	0	0	0	0
10-14	0	0	0	1	1
15-19	0	2	1	0	2
20-24	8	5	3	10	3
25-29	25	17	5	14	24
30-34	34	27	11	24	16
35-39	32	32	22	26	31
40-44	34	24	29	26	23
45-54	20	29	24	29	40
55-64	6	9	6	6	14
≥65	1	0	1	5	3
Not Specified	0	0	0	0	0
Total	160	145	105	141	157

HP 2010 Objective = 1.0 cases per 100,000 population
San Bernardino County: 7.8 cases per 100,000 population

Incidence Rates for AIDS in San Bernardino County, California, and the United States 1997 - 2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Sexual Contact

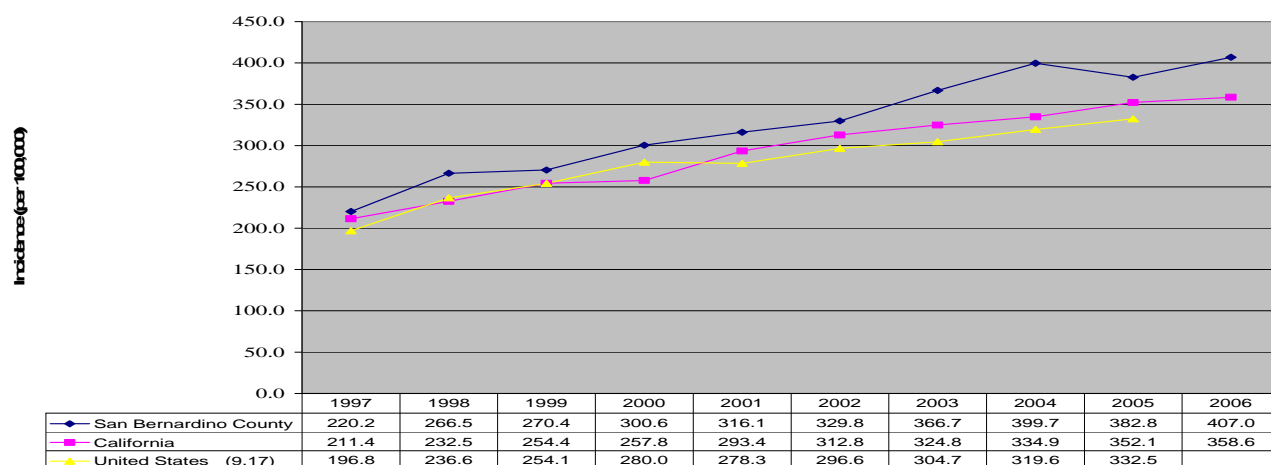
Chlamydia

- Chlamydia trachomatis* infections are among the most prevalent sexually transmitted infections since 1994, and have comprised the largest proportion of STIs reported to the Centers for Disease Control and Prevention (CDC). In women, chlamydia infections, which are usually asymptomatic, may result in pelvic inflammatory disease, a major cause of infertility, ectopic pregnancy, and chronic pelvic pain.
- In 2005, 976,445 chlamydia infections were reported to the CDC from all 50 states and the District of Columbia, an increase of 5.1% compared with the rates in 2004.
- Nationally, the rate of chlamydia among Blacks was over 8 times higher than that of Whites (1,247.0 and 152.1 cases per 100,000, respectively). Among women, the highest age-specific rates of reported chlamydia in 2005 were among 15- to 19-year-olds and 20- to 24-year-olds.
- Prevention strategies include behavior changes, such as delaying age of first intercourse, decreasing number of sexual partners, and consistent and correct use of condoms. Identification and treatment of persons with genital infection before they can transmit the infection is also crucial.
- C. trachomatis* infections are among the most common bacterial infections in the world. At least 500 million people are affected by ocular trachoma worldwide, and 7 to 9 million become blind as a result. Ocular trachoma is considered the most preventable cause of blindness in the world.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	796	882	963	862	758
Black	851	870	1122	1204	1041
Hispanic	1550	1556	1783	1987	1842
Asian	73	113	137	119	95
Native Am	8	12	6	14	15
Other /					4
Not Specified	2713	3395	3606	3248	4308
Age Group					
<1	1	11	6	3	10
1-4	0	0	0	1	0
5-9	1	1	0	1	2
10-14	87	76	109	77	75
15-19	1942	2193	2565	2502	2668
20-24	2341	2692	2883	2813	3058
25-29	865	983	1135	1097	1194
30-34	418	475	494	466	522
35-39	175	217	220	244	281
40-44	97	99	110	118	118
45-54	49	66	75	93	97
55-64	13	11	14	15	24
≥65	2	4	6	4	14
Not Specified	0	0	0	0	0
Total	5991	6828	7617	7434	8063

HP 2010 Objective = 3% of females and males aged 15-24 years attending family planning and STD clinics

Incidence Rates for Chlamydia in San Bernardino County, California, and the United States, 1997 - 2006



San Bernardino County Reported Communicable Diseases 2006

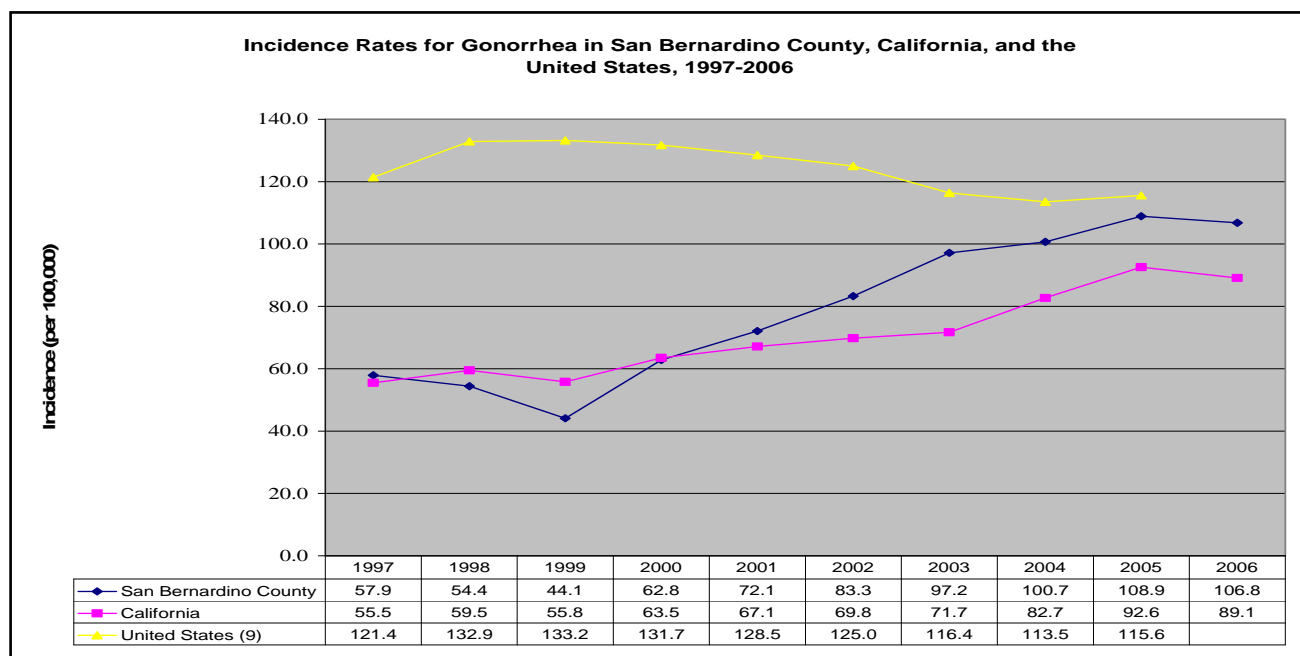
Diseases Transmitted by Sexual Contact

Gonorrhea

- Gonorrhea is caused by *Neisseria gonorrhoeae*, and is the third most commonly reported notifiable disease in the United States.
- In 2005 the rate of reported gonorrhea in the United States was 115.6 cases per 100,000 persons vs. 113.5 in 2004. This is the first increase in gonorrhea since 1999.
- Rates among women have remained slightly higher than in men (119.1 and 111.5 respectively). In 2005, gonorrhea rates continued to be highest among adolescents and young adults. The overall gonorrhea rate was highest for 20- to 24-year-olds (506.8), which is over 4 times higher than the national gonorrhea rate.
- While decreases in rates have been reported predominantly among Black men and women, their rates are still 19 times higher than for Whites, even though there has been a slight increase in rates among Whites and Hispanics.
- The highest rates for gonorrhea have been among Blacks age 15-24 years, and especially 20-24 years.
- Symptoms of a gonococcal infection may include a purulent discharge with dysuria. A small number of males have no symptoms. Females may have asymptomatic mucopurulent cervicitis.
- Gonorrhea can also be acquired prenatally. Conjunctivitis occurs in newborns, less commonly in adults.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	191	279	221	257	212
Black	382	416	480	572	435
Hispanic	268	328	364	391	360
Asian	10	16	22	22	11
Native Am	3	0	1	6	4
Other /					1
Not Specified	660	771	831	866	1091
Age Group					
<1	0	2	0	2	1
1-4	0	1	1	0	2
5-9	0	2	0	0	4
10-14	8	22	19	30	17
15-19	384	438	453	529	563
20-24	519	544	620	682	692
25-29	279	320	330	384	361
30-34	159	208	215	212	195
35-39	66	107	110	120	140
40-44	47	95	77	82	66
45-54	40	45	71	53	58
55-64	11	20	19	13	13
≥65	1	6	4	7	2
Not Specified	0	0	0	0	0
Total	1514	1810	1919	2114	2114

HP 2010 Objective: 19 cases per 100,000 population
San Bernardino County: 106.8 cases per 100,000 population



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Sexual Contact

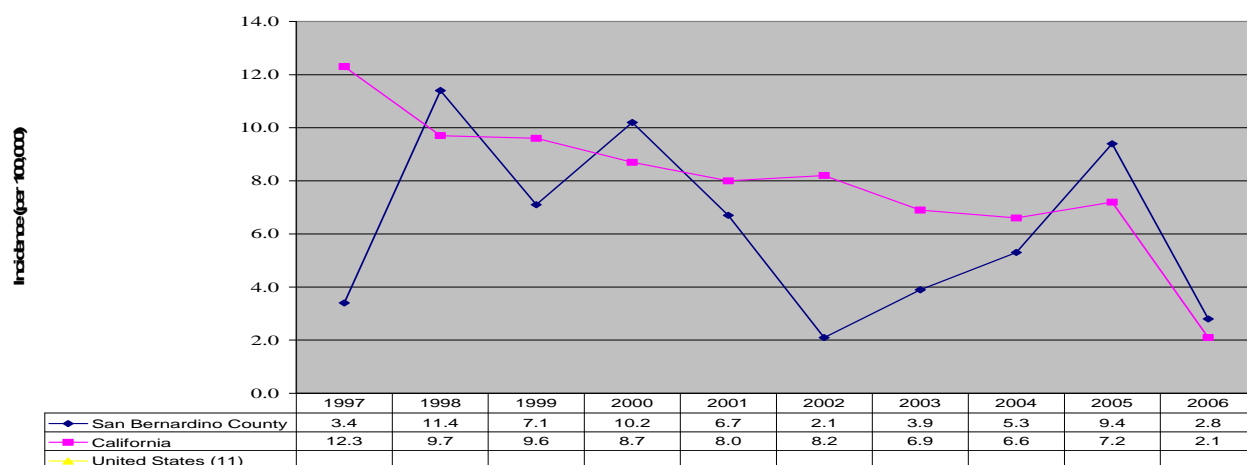
Pelvic Inflammatory Disease

- Pelvic inflammatory disease (PID) is a general term referring to infection of the uterus (womb), fallopian tubes (tubes that carry eggs from the ovaries to the uterus) and other reproductive organs. It is a common and serious complication of some sexually transmitted diseases, especially chlamydia and gonorrhea.
- Left untreated, PID can cause serious consequences including infertility, ectopic pregnancy (a pregnancy in the fallopian tube or elsewhere outside of the womb), abscess formation, and chronic pelvic pain. An estimated one-million women experience an episode of acute PID each year and more than 100,000 women become infertile yearly as a result of PID.
- Age is inversely related to the rate of PID, as sexually active teenagers are three times more likely to be diagnosed with PID than are women 25-29 years of age. Other risk factors include a history of multiple sex partners and frequent intercourse with a single partner.
- PID results from the spread of microorganisms from the vagina or endocervix into the endometrium and fallopian tube mucosa. Two of the most common microorganisms causing this are also responsible for gonorrhea and chlamydia infections.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	4	12	17	24	12
Black	3	10	13	28	10
Hispanic	8	9	15	25	23
Asian	1	1	0	1	0
Native Am	0	0	0	0	0
Other /					
Not Specified	3	4	5	13	11
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	2	3	1	0
15-19	3	10	12	16	9
20-24	4	8	13	27	17
25-29	2	3	5	17	8
30-34	5	5	7	10	13
35-39	2	5	4	9	5
40-44	2	1	1	9	2
45-54	0	2	5	1	2
55-64	1	0	0	0	0
≥65	0	0	0	1	0
Not Specified	0	0	0	0	0
Total	19	36	50	91	56

HP 2010 Objective = Reduce the proportion to 5% of females who have ever required treatment for pelvic inflammatory disease (PID).

Incidence Rates for Pelvic Inflammatory Disease (PID) in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

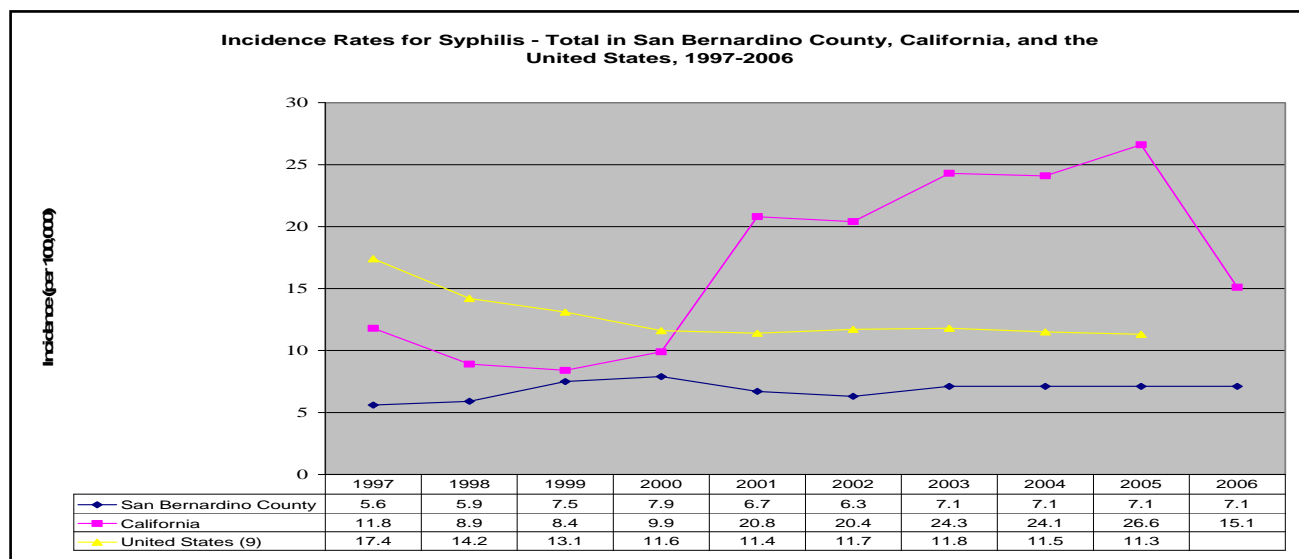
Diseases Transmitted by Sexual Contact

Syphilis, All Stages*

- Syphilis can be acquired through sexual contact, by passage through the placenta, kissing or other close contact with an active lesion, transfusion of fresh, contaminated human blood, or by direct accidental inoculation. The majority of syphilis cases are transmitted through sexual intercourse.
- A patient with syphilis is most infectious early in the disease when the pathogen is present in the mucous membranes, but becomes less infectious overtime, and eventually noninfectious after four years if still immunologically intact.
- For unknown reasons, the highest incidences in the United States of syphilis infection persist in the southeastern region of Maryland to Florida and to Louisiana.
- Syphilis remains a major global health problem, with over 12 million cases occurring worldwide, especially in underdeveloped countries and some parts of Eastern Europe.
- A disproportionately large number of cases occurred in homosexuals from the mid 1960s to the mid 1990s. Now, however the majority of cases occur in heterosexuals, including a dramatic increase in congenital syphilis.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	14	12	26	22	18
Black	10	14	21	19	34
Hispanic	68	74	59	64	70
Asian	6	4	3	7	2
Native Am	0	0	0	0	0
Other /					1
Not Specified	17	30	26	25	19
Age Group					
<1	0	2	1	3	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	1	1	0	1
15-19	6	7	1	11	5
20-24	8	18	9	12	10
25-29	9	17	18	22	18
30-34	18	21	18	17	14
35-39	22	15	31	20	20
40-44	15	20	16	17	27
45-54	21	18	24	16	30
55-64	9	7	6	10	16
≥65	7	8	10	9	3
Not Specified	0	0	0	0	0
Total	115	132	135	137	144

*Includes congenital, early latent, late, late latent, latent (unknown duration), and neurosyphilis.



San Bernardino County Reported Communicable Diseases 2006

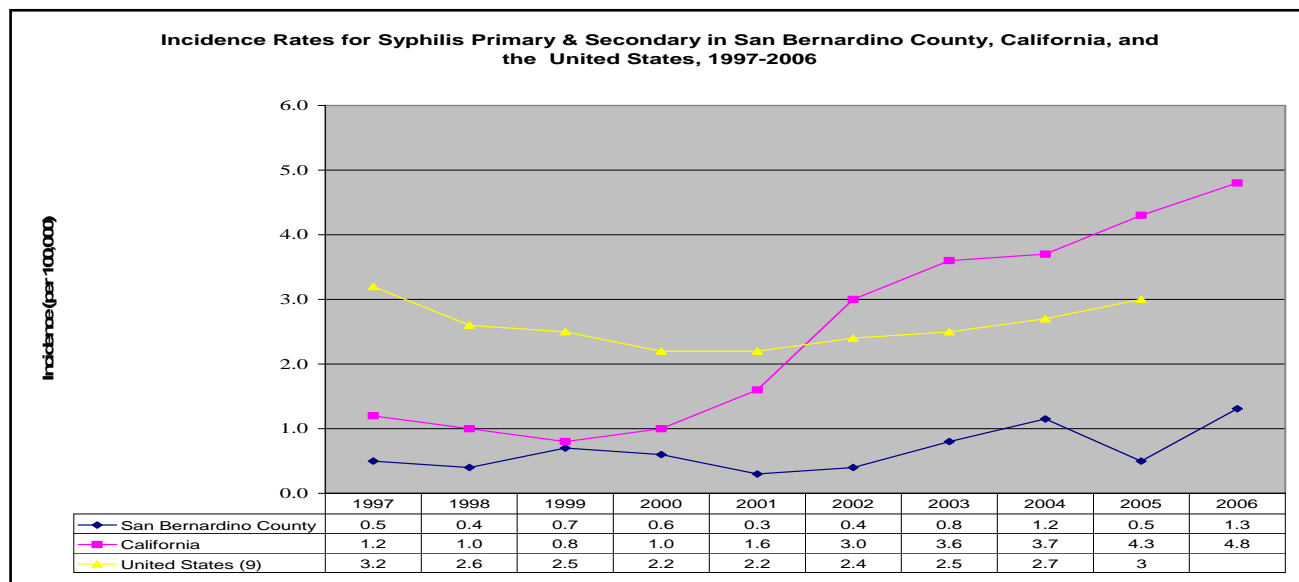
Diseases Transmitted by Sexual Contact

Syphilis, Primary/Secondary

- Although the rate of primary and secondary syphilis in the United States declined 89.7% between 1990 and 2000, the rate of syphilis increased from 2001 to 2005. Overall increases in rates between 2001 and 2005 were observed primarily among men.
- Primary syphilis is marked by the appearance of a single sore (chancre), but there may be multiple chancres. The incubation period can range from 10 to 90 days.
- The chancre is smooth, round, small, firm, and painless, and appears where the syphilis entered the body. This lasts for 3 to 6 weeks, and if left untreated, can progress to secondary syphilis, and further to late stage syphilis leading to death.
- Secondary syphilis is characterized by mucous membrane lesions and a skin rash. Rashes are rough, reddish or brown spots on the palms of hands or bottoms of feet, and do not cause itching. Other symptoms may include fever, swollen lymph nodes, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue.
- The signs and symptoms of primary and secondary syphilis may resolve with or without treatment.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	2	4	12	2	5
Black	0	2	4	3	6
Hispanic	4	8	2	4	10
Asian	0	0	2	0	1
Native Am	1	0	0	0	0
Other /					0
Not Specified	0	1	2	1	4
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	0	0	0	0
15-19	2	1	0	0	1
20-24	0	3	2	3	3
25-29	0	2	1	4	3
30-34	1	3	4	1	1
35-39	3	3	5	1	5
40-44	0	3	4	0	4
45-54	1	0	6	1	5
55-64	0	0	0	0	4
≥65	0	0	0	0	0
Not Specified	0	0	0	0	0
Total	7	15	22	10	26

HP 2010 Objective: 0.2 cases per 100,000 population
San Bernardino County: 1.3 cases per 100,000 population



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Respiratory Secretions

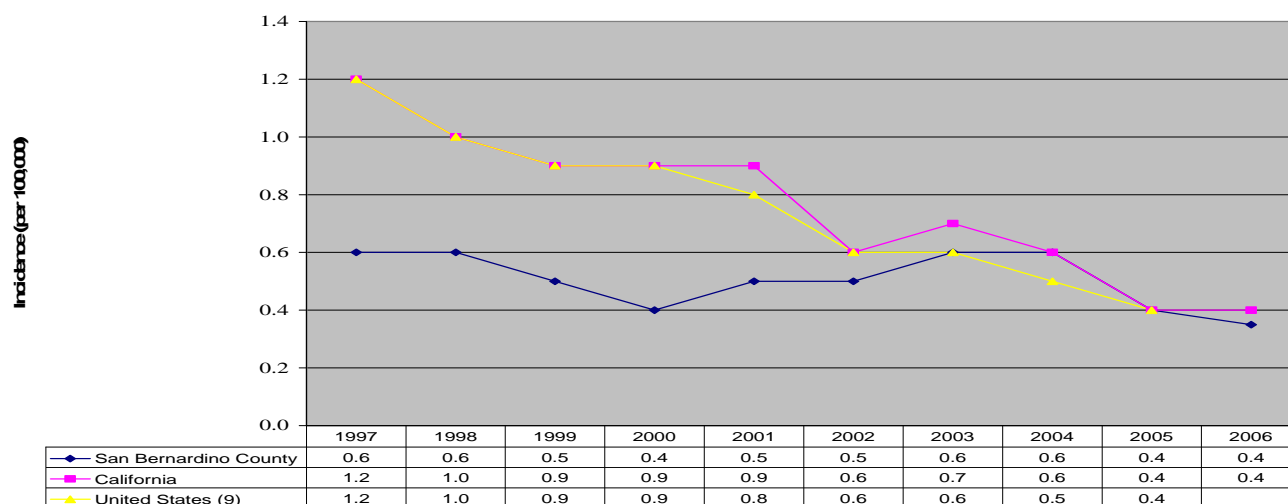
Meningococcal Disease

- The infectious agent *Neisseria meningitidis* is a significant cause of bacterial meningitis and sepsis in the United States.
- N. meningitidis* colonizes mucosal surfaces of the nasopharynx and is transmitted through direct contact with large droplet respiratory secretions from the patients or asymptomatic carriers. Humans are the only host.
- Each year, an estimated 1,400 to 2,800 cases of meningococcal disease occur in the United States, a rate of 0.5 to 1.1 per 100,000 population.
- The number of invasive meningococcal disease cases reported to the Centers for Disease Control and Prevention in 2004 has decreased by 22% as compared to the number of cases reported in 2003.
- The case-fatality ratio remains at a high 10% to 14%, and 11% to 19% of surviving cases have serious health problems. The rates of meningococcal disease are highest among infants, with a second peak at 18 years of age.
- Bacterial meningitis now is a disease predominantly of adults rather than infants or children. However, a new tetravalent vaccine was licensed in 2005 for persons aged 11-55 years.

	San Bernardino County				
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	4	4	3	4	1
Black	0	1	0	0	1
Hispanic	4	2	5	2	4
Asian	1	0	0	0	0
Native Am	0	0	0	0	0
Other /					0
Not Specified	0	5	1	1	1
Age Group					
<1	2	2	1	1	1
1-4	1	2	0	1	1
5-9	0	0	0	0	0
10-14	1	0	1	0	1
15-19	1	1	2	1	2
20-24	0	1	0	0	0
25-29	1	2	0	0	0
30-34	0	0	0	1	0
35-39	0	0	0	1	0
40-44	0	0	0	0	1
45-54	0	2	2	1	1
55-64	1	2	2	1	0
≥65	2	0	1	0	0
Not Specified	0	0	0	0	0
Total	9	12	9	7	7

HP 2010 Objective: 1 case per 100,000 population
San Bernardino County: 0.4 cases per 100,000 population

Incidence Rates for Meningococcal Infection in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

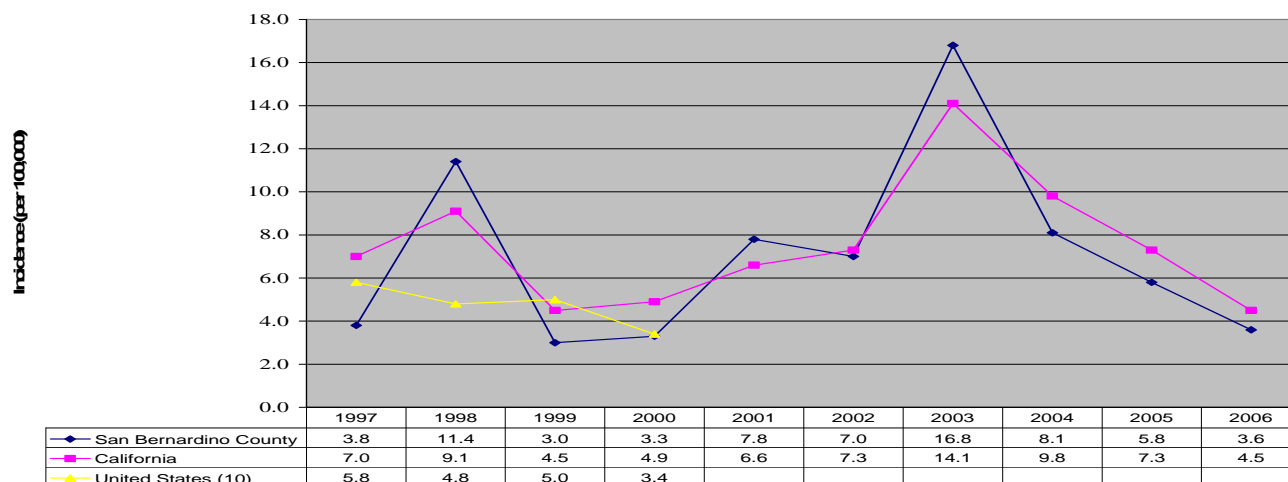
Diseases Transmitted by Respiratory Secretions

Meningitis, Viral

- Meningitis is an infection of the fluid in the spinal cord and the fluid that surrounds the brain. Meningitis is usually caused by an infection with a virus or a bacterium. Knowing whether meningitis is caused by a virus or a bacterium is important because of differences in the seriousness of the illness and the treatment needed.
- Viral meningitis is usually relatively mild. It clears up in a week or two without specific treatment. Viral meningitis is also called aseptic meningitis.
- Viral meningitis is caused by any of a number of different viruses many of which are commonly found affecting the intestines. Enteroviruses account for 85%-95% of all cases of viral meningitis, making enterovirus infection the leading cause of aseptic meningitis syndrome.
- The Centers for Disease Control and Prevention estimate that 10-15 million symptomatic enteroviral infections occur annually in the United States, and this includes 30,000 to 75,000 cases of meningitis. However, this may be an underestimation of the true incidence due to underreporting.
- Enteroviral meningitis infections occur mainly in infants and young children, as they are the most susceptible host population, being without prior exposure and acquired immunity.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	44	57	50	37	26
Black	20	28	19	13	5
Hispanic	49	88	57	36	35
Asian	2	4	3	5	1
Native Am	0	0	1	0	0
Other /					1
Not Specified	13	136	28	22	5
Age Group					
<1	15	37	16	10	12
1-4	7	17	7	6	1
5-9	26	57	34	10	1
10-14	15	59	21	8	7
15-19	8	43	15	8	7
20-24	9	38	8	11	4
25-29	14	17	14	9	14
30-34	10	21	10	10	5
35-39	4	7	4	10	3
40-44	8	3	5	12	4
45-54	8	10	17	8	6
55-64	4	3	2	5	5
≥65	0	1	5	6	4
Not Specified	0	0	0	0	0
Total	128	313	158	113	73

Incidence Rates for Meningitis, Viral in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Respiratory Secretions

Mumps

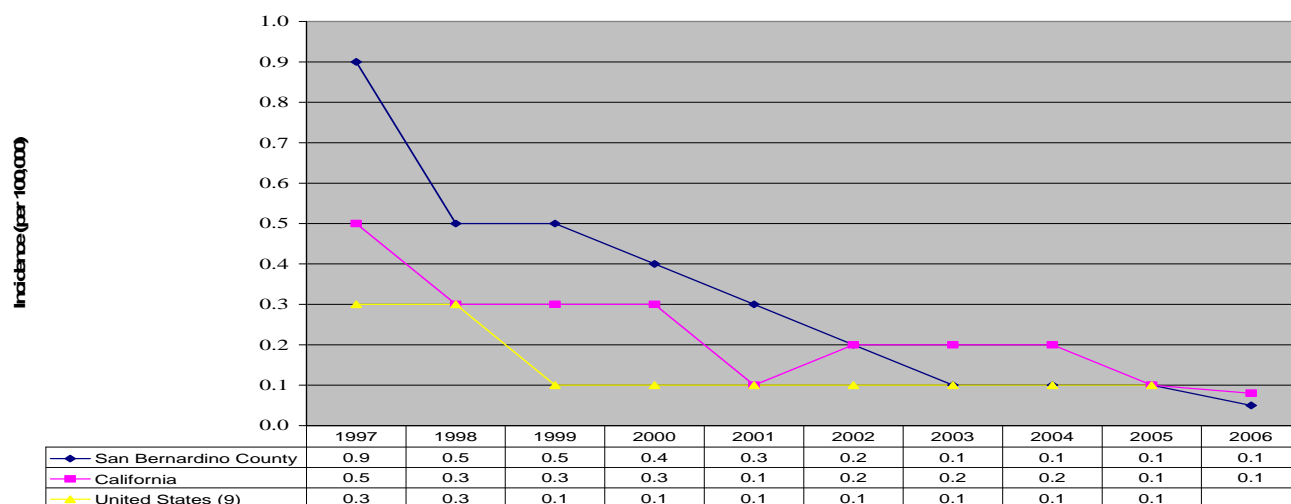
- The mumps virus is naturally transmitted via direct contact, droplet nuclei, or fomites. This acute viral infection occurs primarily in school-aged children and adolescents.
- Humans are the only known natural host for the mumps virus, although monkeys and other laboratory animals have been experimentally infected in laboratory settings.
- The incubation period of mumps is 14–18 days (range, 14–25 days). The symptoms are nonspecific, and include myalgia, anorexia, malaise, headache, and low-grade fever. Parotitis (swelling of the salivary glands) is the most common manifestation and occurs in 30%–40% of infected persons. Parotitis tends to occur within the first two days and may first be noted as earache and tenderness on palpation of the angle of the jaw.
- Symptoms tend to decrease after one week and usually resolve after ten days. In 2001, 49% of reported infections occurred in persons >15 years of age. At the present, immunity to mumps among children and most young adults depend on prior vaccinations. The most common symptomatic manifestation is swelling of the parotid salivary glands.
- Since 1989, the number of reported mumps cases has steadily declined, from 5,712 cases to a total of 258 cases in 2004

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	1	1	0	0	0
Black	0	0	0	0	0
Hispanic	2	0	2	0	0
Asian	0	1	0	1	1
Native Am	0	0	0	0	0
Other /					0
Not Specified	1	0	0	1	0
Age Group					
<1	0	0	0	0	0
1-4	1	1	1	0	0
5-9	1	0	0	1	0
10-14	1	0	0	0	0
15-19	0	0	1	0	0
20-24	0	0	0	0	0
25-29	0	0	0	1	1
30-34	0	1	0	0	0
35-39	0	0	0	0	0
40-44	0	0	0	0	0
45-54	1	0	0	0	0
55-64	0	0	0	0	0
≥65	0	0	0	0	0
Not Specified	0	0	0	0	0
Total	4	2	2	2	1

HP 2010 Objective: 0 cases

San Bernardino County: 0.1 cases per 100,000 population

Incidence Rates for Mumps in San Bernardino County, California, and the United States, 1997-2006



San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Respiratory Secretions

Pertussis

- Major complications are most common among infants and young children and include hypoxia, apnea, pneumonia, seizures, encephalopathy, and malnutrition. Young children can die from pertussis and 13 children died in the United States in 2003. Most deaths occur among unvaccinated children or children too young to be vaccinated.
- This disease continues to increase, with 25,827 cases reported in the United States in 2004, the highest number in 40 years. The increase can either be contributed to an actual increase in incidence, or the increased recognition and diagnosis of this disease in adolescents and adults.
- Pertussis is extremely contagious with up to 90% of susceptible household contacts developing clinical disease following exposure to an index case.
- This organism is localized in the respiratory tract, and transmission is believed to occur predominantly through aerosol droplets, with the highest attack rates observed in person exposed to a coughing patient.
- In the pre-vaccine era for this disease, pertussis was primarily a disease of young children, but adolescents and adults now account for an estimated 67% of cases due to waning immunity.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	5	3	0	13	6
Black	3	0	0	7	0
Hispanic	8	14	0	12	6
Asian	0	2	0	0	0
Native Am	0	0	0	0	0
Other /					0
Not Specified	3	3	0	1	1
Age Group					
<1	14	19	19	21	4
1-4	3	1	1	0	1
5-9	0	2	3	2	2
10-14	1	0	2	6	2
15-19	0	0	1	2	1
20-24	1	0	1	1	0
25-29	0	0	1	0	0
30-34	0	0	0	1	3
35-39	0	0	0	0	0
40-44	0	0	1	0	0
45-54	0	0	0	0	0
55-64	0	0	1	0	0
≥65	0	0	0	0	0
Not Specified	0	0	0	0	0
Total	19	22	30	33	13

HP 2010 Objective: 2,000 cases

San Bernardino County: 0.7 cases per 100,000 population

Incidence Rates for Pertussis in San Bernardino County, California, and the United States, 1997-2006



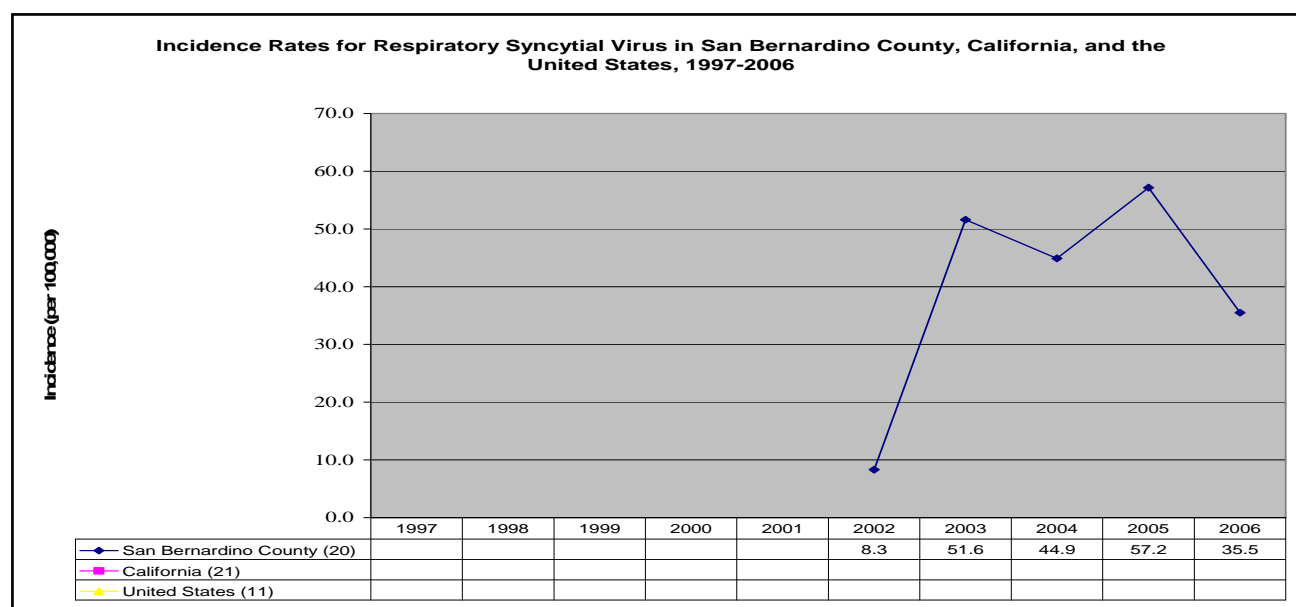
San Bernardino County Reported Communicable Diseases 2006

Diseases Transmitted by Respiratory Secretions

Respiratory Syncytial Virus

- Respiratory Syncytial Virus (RSV) is a virus that causes lung and respiratory tract infections.
- RSV is the most common cause of bronchiolitis and pneumonia among infants and children under one year of age. Premature infants and infants who reside in a home with school aged children are at an increased risk of developing RSV.
- Symptoms of RSV include fever, runny nose, cough, wheezing, rapid breathing and difficulty breathing.
- Infection occurs when the virus comes in contact with mucous membranes of the eyes, mouth, or nose, or through inhalation of droplets generated by a sneeze or cough of an infected person.
- While RSV is most common in children, it can also cause serious illness in older adults and adults with heart and lung diseases.
- RSV has been reportable in San Bernardino County since November 13, 2002.

	San Bernardino County				
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	7	228	166	355	191
Black	21	84	53	108	40
Hispanic	56	284	234	439	306
Asian	3	8	6	18	8
Native Am	1	17	1	1	4
Other / Not Specified	62	340	397	165	154
Age Group					
<1	114	711	635	816	552
1-4	34	215	211	251	82
5-9	1	9	7	7	34
10-14	0	1	1	1	13
15-19	0	0	0	0	7
20-24	0	0	0	0	3
25-29	0	0	0	0	3
30-34	0	0	0	0	1
35-39	0	1	0	0	4
40-44	0	0	0	1	1
45-54	0	0	0	1	1
55-64	0	0	1	0	1
≥65	0	0	0	0	1
Not Specified	1	1	2	9	0
Total	150	961	857	1086	703



San Bernardino County Reported Communicable Diseases 2006

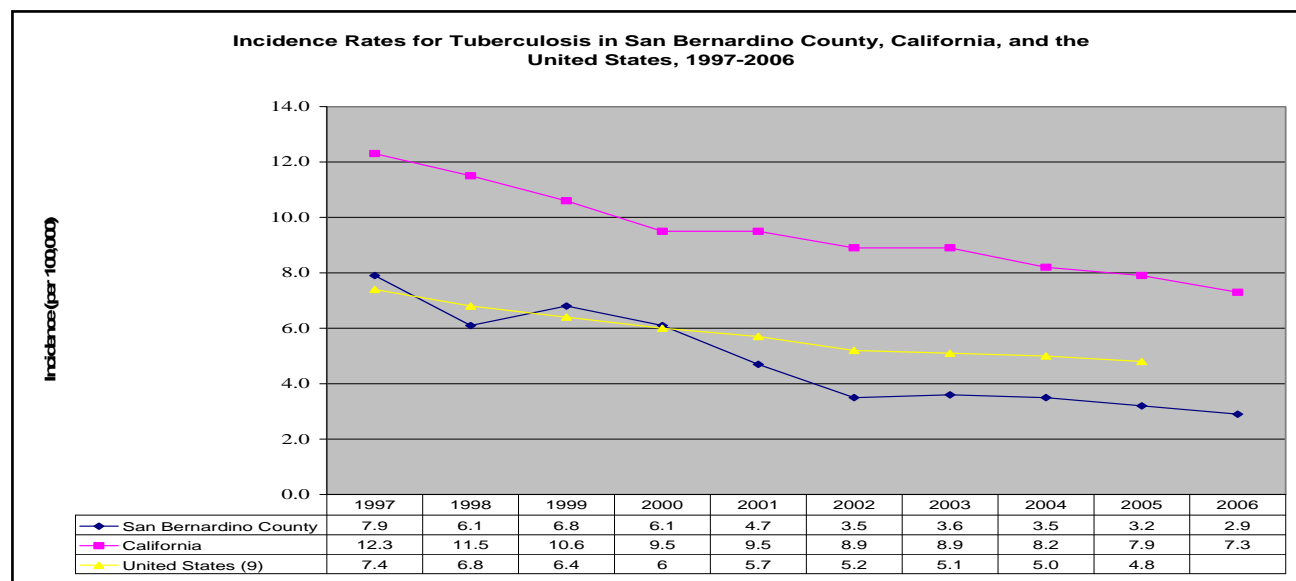
Diseases Transmitted by Respiratory Secretions

Tuberculosis

- A newly identified tuberculosis (TB) strain, extensive or extreme drug resistance (XDR-TB) has emerged. In the United States, 4% of multi-drug resistant cases were XDR-TB.
- The 14,097 TB cases reported to the Centers for Disease Control and Prevention for 2005 represented a 2.9% decrease from 2004 and a 47% decrease from 1992, when the number of cases and the case rate peaked during a resurgence in the United States.
- In 2005, the proportion of total cases occurring in the foreign-born was 55%, constituting a majority of cases for the fourth consecutive year.
- From 2001 through 2005, the top five countries of origin of foreign-born persons with TB were Mexico, Philippines, Vietnam, India, and China.
- Proper adherence to treatment regimens has been shown to greatly reduce the number of drug resistant cases worldwide.
- Patients who do not take their medication regularly are most often placed on directly observed therapy (DOT) to reduce their risk of becoming resistant to tuberculosis medications.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	7	9	7	6	4
Black	7	7	6	4	1
Hispanic	24	29	28	35	37
Asian	24	21	24	14	15
Native Am	0	0	0	0	0
Other /					1
Not Specified	2	1	2	4	0
Age Group					
<1	0	0	1	0	2
1-4	1	1	1	4	1
5-9	0	2	1	0	1
10-14	1	1	0	0	1
15-19	1	4	2	5	1
20-24	6	3	3	2	1
25-29	7	0	8	5	4
30-34	6	4	7	3	4
35-39	8	6	7	4	7
40-44	1	7	5	6	2
45-54	7	13	14	12	7
55-64	11	12	6	7	6
≥65	15	14	12	15	21
Not Specified	0	0	0	0	0
Total	64	67	67	63	58

HP 2010 Objective: 1 case per 100,000 population
San Bernardino County: 2.9 cases per 100,000 population



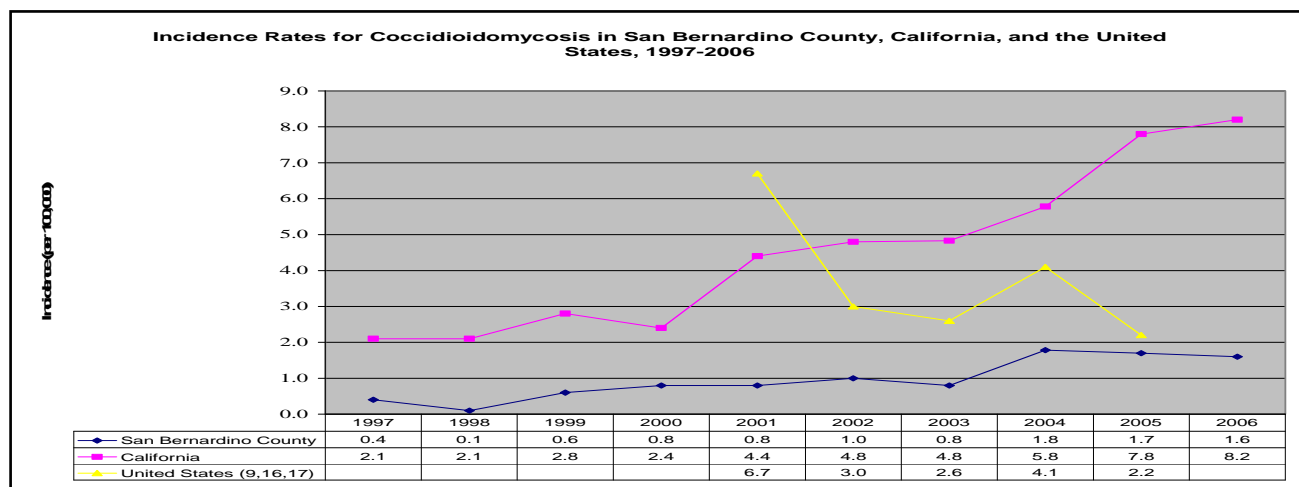
San Bernardino County Reported Communicable Diseases 2006

Diseases Associated with Environmental Factors

Coccidioidomycosis

- *Coccidioides immitis* is the pathogenic fungus that grows as a mold in soil and causes coccidioidomycosis, or Valley fever. It is found in the southwestern United States, and Central and South America.
- Inhalation of contaminated soil particles often leads to infection in humans and animals by the arthroconidia, the reproductive units of this dimorphic fungus.
- Exposure to dust particles laden with the fungus is a risk factor in acquiring the disease, which makes occupational and recreational exposure a concern. Cases of infection have occurred when driving through dust storms, and increases were seen after the Northridge earthquake in California, which was thought to have increased the dust production.
- Coccidioidomycosis results in symptomatic infection in 40% of cases who are exposed, and typically presents as flu-like, with fever, cough, chills, headache, rash, and myalgia. Some individuals fail to recover and develop chronic pulmonary infection. And in immunocompromised persons widespread disseminated infection, affecting soft tissues and bone can lead to death.
- In endemic regions, preventive measures for this disease include planting grass, wetting soil, and any other form of dust-control measure (including facemasks and oiling unpaved airfields). In non-endemic areas, "dusty occupations" should be avoided.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	4	4	9	5	13
Black	5	0	9	7	3
Hispanic	3	1	4	11	11
Asian	0	0	7	1	2
Native Am	0	1	0	0	0
Other /					0
Not Specified	7	8	5	9	3
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	0	0	1	0
15-19	1	0	3	2	1
20-24	2	0	1	2	3
25-29	0	2	3	2	1
30-34	0	4	3	1	1
35-39	1	1	3	2	4
40-44	0	2	6	9	3
45-54	8	2	5	5	8
55-64	4	1	6	7	7
≥65	3	2	6	2	4
Not Specified	0	0	0	0	0
Total	19	14	34	33	32



San Bernardino County Reported Communicable Diseases 2006

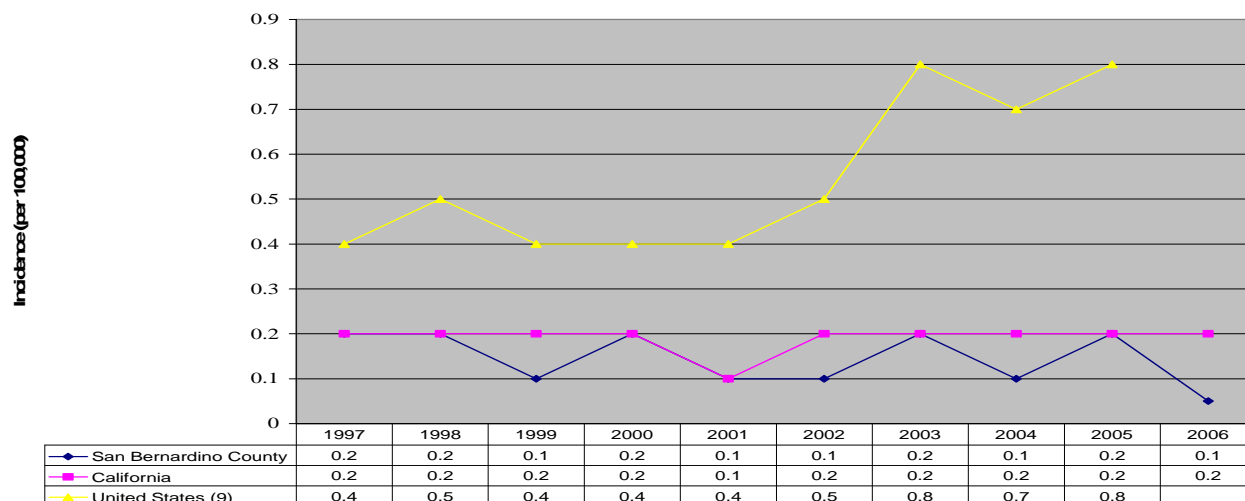
Diseases Associated with Environmental Factors

Legionellosis

- *Legionella pneumophila* is a bacterium that is often associated with warm, moist environments and causes disease through inhalation of the bacteria into the lungs.
- Its gained notoriety as a public health concern in 1976 when a large number of people attending an American Legion's conference in Philadelphia became ill with the disease.
- The bacteria are found in aqueous environment in a large variety of habitats including lakes, streams, and costal waters, at temperatures ranging from 5° to 50°F.
- *Legionella* infection can take on two forms: Legionnaire disease which involves the lungs and causes pneumonia, and Pontiac Fever which is a milder form of illness without pneumonia.
- Risk factors for Legionnaire disease include age, pre-existing lung disease, and having compromised immune systems as seen in cancer or HIV/AIDS. Smoking increases risk by about twofold to sevenfold and environmental conditions may also facilitate the spread of the bacteria, such as wind direction, humidity, and aerosol formation.

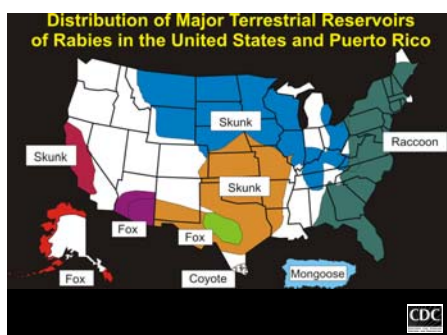
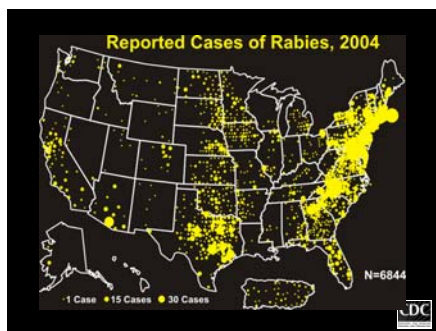
San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	0	2	1	2	0
Black	1	1	0	1	0
Hispanic	1	0	0	0	1
Asian	0	0	1	0	0
Native Am	0	0	0	0	0
Other / Not Specified	0	1	0	0	0
Age Group					
<1	0	0	0	0	0
1-4	0	0	0	0	0
5-9	0	0	0	0	0
10-14	0	0	0	0	0
15-19	0	0	0	0	0
20-24	0	0	0	0	0
25-29	0	0	0	0	1
30-34	0	0	0	0	0
35-39	0	0	0	0	0
40-44	1	0	0	0	0
45-54	1	2	1	2	0
55-64	0	2	0	0	0
≥65	0	0	1	1	0
Not Specified	0	0	0	0	0
Total	2	4	2	3	1

Incidence Rates for Legionellosis in San Bernardino County, California, and the United States, 1997-2006

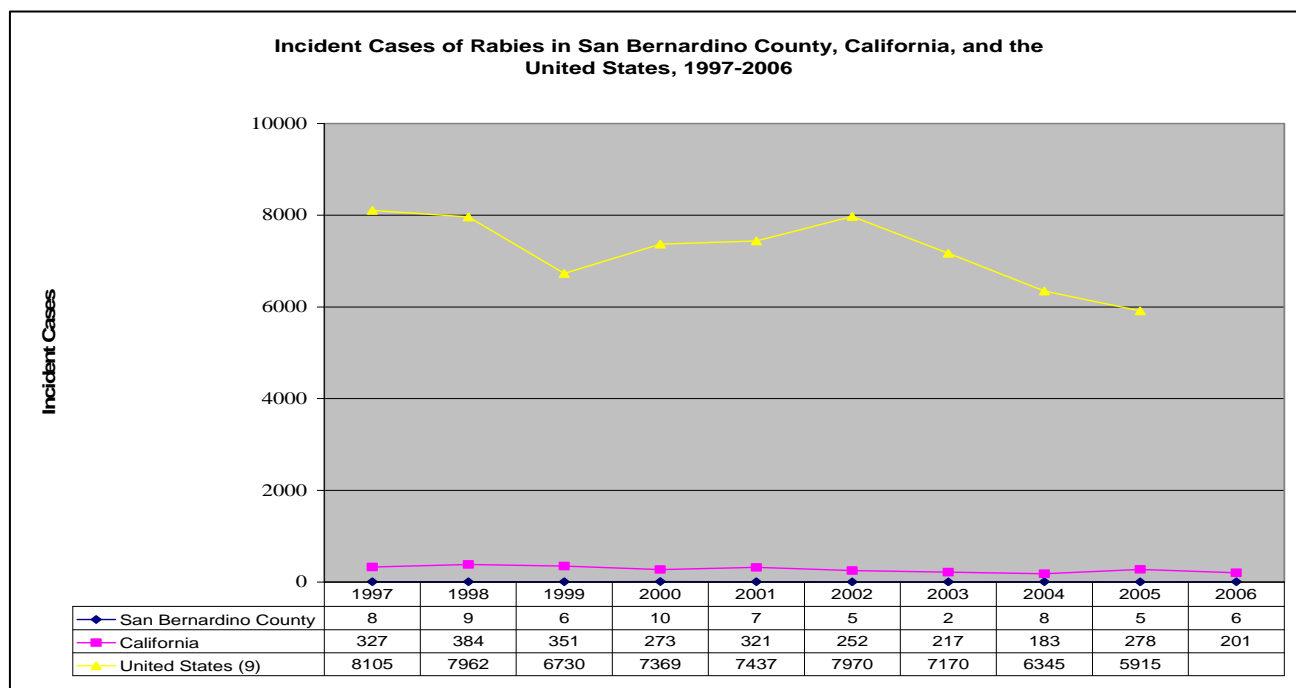


Rabies, Animal

- In 2006 in San Bernardino County, six bats were reported as positive. Bats should not be handled by bare hands and if necessary use gloves and other protective equipment, or contact local animal control services.
- Rabies is currently distributed worldwide, and the epidemiology of human rabies is dependent on the infected local animal population. In 2006, 158 (88.6%) cases, 40 (10.9%) skunks, 2 (0.4%) foxes, and 1 (0.4%) horse. No dogs were reported rabid in CA in 2006.
- In 2006 in California, 201 animals were reported rabid including 158 (78.6%) cases, 40 (19.9%) skunks, 2 (0.9%) foxes, and 1 (0.4%) horse. No dogs were reported rabid in CA in 2006.



- Medical assistance should be obtained as soon as possible after an exposure. There have been no vaccine failures in the United States (i.e., someone developed rabies) when postexposure prophylaxis (PEP) was given promptly and appropriately after an exposure.
- Initial symptoms of rabies resemble those of other systemic viral infections, and include fever, headache, malaise, upper respiratory, gastrointestinal disorders, and paresthesias. In its more advanced stages, there are two forms of rabies: furious and paralytic (dumb) rabies. Furious is classified by delirium, hydrophobia, and agitation. Dumb rabies is classified by an ascending paralysis.
- In the U.S. in 2005 one human case was identified and was most likely related to contact with a bat.
- In 2005, 6,417 animals tested positive for rabies including 2,534 raccoons, 1,478 skunks, 1,408 bats, 376 foxes, 269 cats, 93 cattle, and 76 dogs.



San Bernardino County Reported Communicable Diseases 2005

Diseases Transmitted by Arthropod Vector

Malaria

- Each year 350-500 million cases of malaria occur worldwide, and over one million people die, most of them young children in sub-Saharan Africa.
- Malaria occurs most often in the tropical regions of sub-Saharan Africa, Southeast Asia, and Latin America, but its distribution is continually changing, and differs between the four different species of *Plasmodium* that are known to cause malaria in humans.
- Malaria is transmitted from person to person via infected *Anopheles* mosquitoes. The disease can be prevented and cured. Preventive efforts at control include bed-nets, insecticides, and anti-malarial drugs. Travelers to a malaria-risk area should avoid mosquito bites and take a preventive antimalarial medications.
- In 2006, California had a total of 177 cases of malaria, and San Bernardino County had a total of 8 cases.
- Outbreaks of malaria have occurred in the past when local mosquitos bite an infected person. Between 1957 and 2003, in the United States, 63 outbreaks of locally transmitted mosquito-borne malaria have occurred. Cases of infection are usually acquired by persons who have traveled to areas found to be endemic with the disease and brought it back with them.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	1	1	0	0	2
Black	8	7	0	3	5
Hispanic	0	2	0	1	0
Asian	3	0	0	3	1
Native Am	0	0	0	0	0
Other /					0
Not Specified	0	1	5	0	0
Age Group					
<1	0	0	0	0	0
1-4	1	0	0	0	0
5-9	1	1	0	0	0
10-14	1	1	0	0	0
15-19	3	1	0	2	2
20-24	0	0	0	0	2
25-29	0	0	0	2	0
30-34	1	0	0	0	0
35-39	0	5	0	1	1
40-44	1	1	0	0	0
45-54	4	2	0	1	1
55-64	0	0	0	0	0
≥65	0	0	0	1	2
Not Specified	0	0	5	0	0
Total	12	11	5	7	8

Incidence Rates for Malaria in San Bernardino County, California, and the United States, 1997-2006



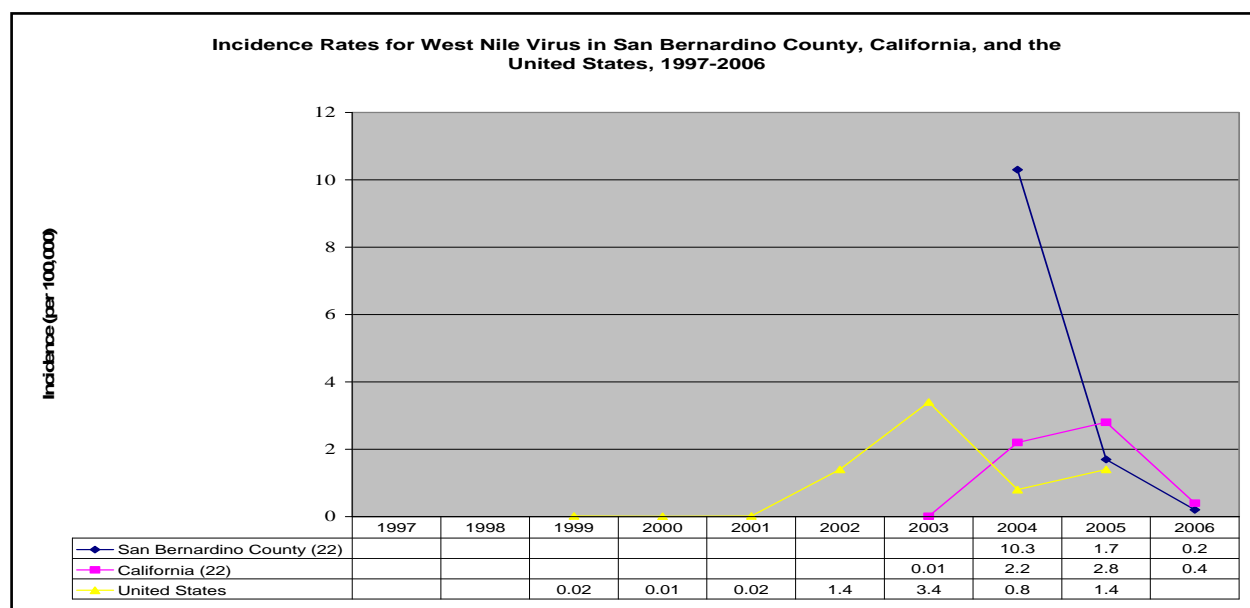
San Bernardino County Reported Communicable Diseases 2005

Diseases Transmitted by Arthropod Vector

West Nile Virus

- In 2006 4,269 cases of West Nile virus infection occurred in the United States, with 177 deaths due to the disease reported. In San Bernardino County 3 cases of infection were reported.
- West Nile is one of the more widely distributed arboviruses. It has mostly been found in Africa, Europe, the Middle East, Asia, Australia, and more recently, the American continent.
- West Nile Virus transmitted via enzoonosis between infected birds and mosquitoes of the genus *Culex*.
- The majority of West Nile infections in humans are asymptomatic. Aproximately, only 1 in 5 infected individuals develop fever, and only 1 in 150 develop the more severe encephalitis form of West Nile. The risk of acquiring the more severe form of the disease increasing with increasing age.
- The best approach to West Nile virus is prevention via using mosquito repellent, removing sources where free standing water may occur, and avoiding outside activity during high mosquito activity, such as at dusk and dawn.

San Bernardino County					
	2002	2003	2004	2005	2006
Race/Ethnicity					
White	0	0	109	19	2
Black	0	0	6	1	0
Hispanic	0	0	66	7	1
Asian	0	0	3	1	0
Native Am/	0	0	3	1	0
Other	0	0	0	1	0
Not Specified	0	0	9	3	0
Age Group					
<1	0	0	0	0	0
1-4	0	0	1	0	0
5-9	0	0	0	0	0
10-14	0	0	4	0	1
15-19	0	0	9	0	0
20-24	0	0	6	1	0
25-29	0	0	10	0	0
30-34	0	0	6	2	1
35-39	0	0	11	5	0
40-44	0	0	19	2	0
45-54	0	0	57	12	0
55-64	0	0	32	4	1
≥65	0	0	41	7	0
Not Specified	0	0	0	0	0
Total	0	0	196	33	3



Section 3

Special Disease Focus:

1. Botulism

Prepared by Anuj Bhatia, MPH, Epidemiology and Bioterrorism
Preparedness Program

2. A Summary of Kawaski Syndrome Cases in San Bernardino County

Prepared by Kim Woods, MPH, Epidemiology and Bioterrorism
Preparedness Program

3. MDR Tuberculosis

Prepared by Lea Morgan, MPH, Epidemiology and Bioterrorism
Preparedness Program

Botulism

Introduction

Botulism is a disease that exists in various parts of California including San Bernardino County. It is caused by the bacterium *Clostridium botulinum* (CDC, 2007). The symptoms of the disease include drooping eyelids, double vision, blurred vision, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. In severe cases, paralysis of breathing muscles can cause a person to stop breathing and die, unless assistance with breathing (mechanical ventilation) is provided.

Disease Overview

Botulism disease occurs worldwide, and in the United States, in areas where home canning of foods, particularly vegetables, is common. There are 3 main types of botulism: foodborne, infant and wound botulism. The most common type is foodborne, where individuals ingest food items that are contaminated with the toxins of the bacteria. These toxins develop from the food, which provides the environment where spores of the bacteria can grow into toxin. The case fatality rate of the disease is around 5% to 10% in the United States (Heymann et. al, 2006). The different items associated with foodborne botulism are large in number and diversity. Foods such as garlic, onions, carrots, salmon, seal meat, sausages and smoked meats have been associated with outbreaks in the past. (Heymann et. al, 2006). Beef, poultry, and milk products have been implicated in lesser numbers of outbreaks (CDC, 1998). Although the majority of cases of botulism have been associated with home processed foods (65.1% from 1950 to 1996), there have been cases reported from commercially produced foods (7% from 1950 to 1996).

In the United States, botulism has been detected in 46 states (CDC, 1998). Additionally, the Western states in the U.S. account for the majority of the cases. This includes states such as California, Washington, Colorado, Oregon, and Alaska (CDC, 1998).

Clostridium botulinum is the name of a group of bacteria commonly found in soil. These organisms grow best in low oxygen conditions. The bacteria form spores, which survive in a dormant state until exposed to conditions (food or bodily) that can support their growth. There are 7 types of botulism toxin designated by the letters A through G; only types A, B, E and F cause illness in humans (CDC, 2007). The toxin is produced when the food is improperly processed, or in low acidic, alkaline environments, and pasteurized foods that are lightly cured without proper refrigeration (Heymann et. al, 2006). In foodborne botulism, it is this toxin that causes illness in individuals that ingest the contaminated food items.

The incubation period of the disease is about 12-36 hours. As a general rule, a shorter incubation period means that the case is more severe and has a higher chance of fatality. Despite the secretion of high amounts of toxin in the feces of infected individuals, no

cases of person-to-person transmission of the disease have been documented (Heymann et. al, 2006).

The fatality rate for botulism up until 1949 was about 60%. However, with the advancements made in respiratory therapy, this mortality rate has steadily declined. Additionally, with the introduction and use of antitoxin, the numbers of deaths from the disease have also declined to 15.5% from 1950 to 1996 (CDC, 1998).

In the past, groups have attempted to utilize botulism as a biological weapon. Examples include a U.S. weapons program after World War II and the attempt to spray the disease in public areas by the Aum Shinrikyo cult in Japan in the 1990's (American Society for Microbiology, 2007).

Infant Botulism

Infant botulism is the most common type of botulism disease reported in the United States and involves the ingestion of the spores by infants (usually) into their body environment where spores are able to grow toxins that cause the disease. Symptoms of the disease include constipation, which is shortly followed by neuromuscular paralysis (CDC, 1998). The risk factors for infant botulism include being born at a higher birth weight. Additionally, their mothers tend to be White, older, and more educated than mothers in the general population (CDC, 1998). Although their delivery method is usually normal, they tend to be breast-fed and this is associated with a higher incidence with increasing maternal age. The disease seems to have an equal rate of infecting both males and females, and the age of infection averages about 13 weeks (CDC, 1998). Although a high level of precaution has been made over the feeding of honey to infants, it does not account for the majority of the cases. Possible sources of infection include living in a dusty environment and in areas where exposure to soil and other material carrying the spores is more possible (Heymann et al., 2006).

Foodborne Botulism

A large number of botulism cases tend to originate from improper canning procedures for foods such as meats, fruits, and vegetables. Recently, a food plant in Georgia recalled canned chili beans that were contaminated as a result of equipment malfunction (FDA, 2007). The various products were identified along with their dates of production and the states that they were distributed to. The public was informed to contact the manufacturing company as well as the FDA with any questions or concerns (FDA, 2007). It is also important in cases such as these for the local health department to be involved in the identification, response, and, for future purposes, documentation of the incidents that go on in their jurisdictions. In another incident, canned string beans were found to be contaminated with botulism. The manufacturing plant was in Wisconsin and the food item was sold under various distributor labels including: Albertson's, Happy Harvest, Best Choice, Food Club, Bogopa, Valu Time, Hill Country Fare, HEB, Laura Lynn, Kroger, and Shop N Save (FDA, 2007).

Wound Botulism

In California, including San Bernardino County, wound botulism has been associated with the use of black tar heroin, a source that tends to be contaminated more often than other forms of heroin. Cases have a median age 21 years, and tend to be mostly male. The actual wounds are deep and some cases include compounded fractures not related to injection drugs (CDC, 1998). The contamination, usually with soil, leads to infection among those injecting the drugs under those conditions. Although the first case of this type of disease was reported in New York in 1982, the vast majority of annual cases (about 75%) are found in California. Due to the high level of association with heroin use, precautions have been given to those at risk of contracting wound botulism. These include:

- Not injecting drugs will prevent you from getting this disease.
- If you continue to inject, be sure your skin and practices are clean.
- Don't use black tar heroin. It is not possible to kill wound botulism by cooking or cleaning the dope.
- Don't share-needles, syringes, filters, cookers, or water.
- Always use a new sterile syringe. If you must re-use (even your own), clean it well with bleach. (San Francisco Health department, 2007).

Diagnosis, Lab testing and Treatment

Diagnosis of botulism is oftentimes missed, and due to the fact that cases can show up on an individual basis, all the more confusing (CDC, 1998). Even studies in outbreak situations have shown that the disease is oftentimes misdiagnosed (CDC, 1998). Lab testing consists of analyzing patient as well as food and/or environmental specimens. In conducting laboratory analyses, it is important to note that only state health laboratories should conduct testing on environmental or animal specimens. Specimens for botulism testing can come from a variety of sources, including: feces, an enema, serum, vomitus or gastric aspirate, tissue or exudates, food specimens, and environmental samples like soil or water (American Society for Microbiology, 2007).

Prevention of Disease

Because high temperatures destroy the botulism toxin, persons who eat home-canned foods should consider boiling the food for 10 minutes before eating it to ensure safety. Instructions on safe home canning can be obtained from county extension services or from the US Department of Agriculture. Specifically, individuals must be educated about the proper pressure, temperature and time required to kill off the bacteria, the need to refrigerate incompletely processed foods, and the effectiveness of boiling in destroying spores (CDC, 1998). Although heating the food does not eliminate the spores, it does destroy the toxin and therefore reduces the risk of infection from ingestion. Additionally, proper canning methods are available from the center for disease control to help decrease the incidence of the disease within the general population. For infant botulism, the main precaution that adults should keep in mind is not giving them honey, as it could contain

spores that could grow toxin inside their bodies (Heymann et. al, 2006). In relation to wound botulism, not sharing needles and insuring clean skin and injection practices can help limit the risk of transmission.

Botulism in San Bernardino County, 2006

In 2006, there were 11 cases of botulism in San Bernardino County. Of these cases, six were infant botulism, 2 were food borne, and 3 were wound botulism. Six (55 %) were male and 5 (45%) were female. For the cases of wound botulism, ages ranged from 30 to 57. The two cases of foodborne botulism were both aged 74, and the range for the cases of infant botulism ranged from 1 to 6 months. In terms of ethnicity, 5 (46%) of the total number of cases were Hispanic, 5 (46%) were non-Hispanic White, and 1 (8%) was classified as “other”. All of the cases of wound botulism had confirmed or highly suspected histories of injection drug use. For the foodborne botulism cases, they were related to each other and had an extensive history of storing and eating canned foods, including carrots, apricots and apples. They were both linked to home-canned carrots. Toxin type A was detected in the patient specimens as well as a sample of home-canned carrots.

The cases had a history of canning fruits and vegetables for years, and denied doing anything differently for the canned foods that were possible sources of infection. Items that were submitted for testing included beef stew, apricots, apples, and soup.

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Kawasaki Syndrome in San Bernardino County

Kawasaki Syndrome (KS) is an acute febrile vasculitis of unknown etiology most commonly found in children under 5 years of age. First identified in 1961, the disease has become the leading cause of acquired heart disease among children in North America and Japan. (Burns et al., 2000)

Background

Kawasaki Syndrome (KS) was first recognized as a distinct syndrome by Tomisaku Kawasaki, a physician in Japan and possibly as early as the 1950s when it was initially called mucocutaneous ocular syndrome. Cases were first recognized in the 1970s in Hawaii. Hawaii continues to have rates of KS two times that of the continental United States, especially among its Asian children. (Belay et al., 2006) It is not clear whether KS is a new disease that emerged in Japan and spread to Hawaii or whether KS has existed much longer than previously thought as another disease such as scarlet fever before antibiotics became available. KS may also be related to infantile periarteritis nodosa a very similar disease that has been described since 1852 in Vienna. The use of antibiotics to treat illnesses caused by toxin-producing bacteria may also have reduced the numbers of fever and rash illnesses to the point where KS could be recognized as a distinct syndrome. (Burns et al., 2000)

Centers for Disease Control and Prevention Case Criteria

Diagnosis relies on observation and recognition of the clinical signs included in the case definition. In order to be considered a case, a patient must have fever for 5 or more days unresponsive to antibiotics and four of the five physical findings, including bilateral conjunctival injection, oral changes, peripheral extremity changes, rash and cervical lymphadenopathy greater than 1.5 cm. A fever of less than 5 days may be counted toward the case definition if it disappeared due to administration of Intravenous Immune Globulin. (CDC 2005)

As many as 10% of patient episodes are classified as incomplete or atypical KS if either the fever criteria or one or more of the other criteria are missing. Atypical KS is more common in children <1 year. (Saulsbury, 2005)

Epidemiology

Studies using population and hospitalization data have estimated the incidence rate of KS to range from 9 to 19 per 100,000 children under 5 years of age in the U.S. The Centers for Disease Control and Prevention (CDC) estimate 4,248 children were hospitalized with KS in 2000. (CDC 2005) Approximately 80% of patients with KS are children under the age of 5 years with peak incidences at ages 1 to 2 years. (Belay et al., 2006). More than half are male. The number of cases in Japan are about five times the number of cases in the United States where the incidence of cases is highest among Asians and Pacific Islanders, followed by Blacks and Whites. Studies of hospital discharge records in Hawaii have also shown that Japanese American children under the age of 5 years living in Hawaii have higher rates of KS than other groups including Native Hawaiian children (2.0 times), White children (>5.5 times) and children living in Japan. (Holman et al., 2005)

KS appears to have a seasonality with increased incidence in winter-spring and community-wide outbreaks have been reported. In an analysis of 84,829 Japanese cases reported 1987-2000, Burns et al. (2005) found peaks of onset in January and June/July with the lowest number of cases reported in October.

Symptoms

KS usually begins with a high fever up to 104 degrees that may last 1-2 weeks in untreated patients. There is bilateral conjunctivitis characterized by hyperemia and lack of purulence. Oropharyngeal mucosal changes are also seen including erythema, fissuring and bleeding of the lips, a strawberry tongue, and erythema of the oropharynx. The palms and soles of the patient may become swollen and painful. Desquamation begins in the periungual area and extends to the palms and soles. An erythematous rash begins after the onset of the fever that is described as raised, deep red, and plaquelike. (Saulsbury, 2005) The rash usually involves the trunk, the extremities and is most pronounced in the perineal area. The least common symptom is cervical lymphadenopathy. Usually only one node is enlarged and is firm and slightly tender. Other symptoms patients with KS may present with include irritability, arthralgia or arthritis, abdominal pain, vomiting, diarrhea, aseptic meningitis, hepatitis, pneumonitis and sensorineural hearing loss.

Laboratory testing may support the diagnosis. The patients may have a moderate leukocytosis with a left shift, the sedimentation rate and C-reactive protein (CRP) are elevated, sterile pyuria and elevated liver enzymes are present, the platelet count begins to rise and there may be increased immunoregulatory cells. Thrombocytosis may occur at this time increasing the risk of coronary artery thrombosis. The convalescent phase is characterized by disappearance of all symptoms and return to normal of the sedimentation rate and platelet count. This usually occurs 6 to 10 weeks after the onset of the illness. (Saulsbury, 2005) Recurrent KS is rare occurring in 1-3% of patients and usually within weeks of the original episode.

Incomplete KS should be considered in children who present with unexplained fever for ≥ 5 days associated with 2 or 3 of the clinical criteria. Echocardiography may be used to confirm the diagnosis at an earlier stage especially if coronary complications are present. (Newburger et al., 2004)

Complications

A characteristic concern with KS is the potential cardiac involvement. During the acute phase as many as 50% of patients have myocarditis with tachycardia and gallop rhythms. Patients may also manifest as congestive heart failure if the myocarditis is severe. Cardiac involvement may also include pericarditis, electrical disturbances and functional deficits in the mitral and aortic valves. In untreated patients a severe sequelae is aneurismal dilatation occurring in approximately 20% of patients. Peak frequency of coronary aneurysm formation occurs within 4 weeks of onset although dilatation of the proximal coronary arteries may be observed as early as 7 days after onset. Coronary aneurysms are more likely to clot during the subacute phase of illness when the patient is experiencing high thrombocytosis. An estimated 1 to 2% of untreated patients may have sudden death from coronary thrombosis and myocardial infarction. These aneurysms may subside within 1 to 2 years in most patients, however coronary artery stenosis and ischemia may persist. Some patients have experienced ischemic heart disease, myocardial infarction and sudden death as young adults in later years. (Saulsbury, 2005) Another study found age under 1 year, male gender, prolonged inflammation with fever greater than 10 days, a recurrence of fever and indications of pericardial, myocardial or endocardial involvement all associated with increased risk of coronary aneurysm. (Belay et al., 2006). In the U.S. the in-hospital mortality rate is 0.17 with the peak in mortality occurring 15 to 45 days after onset. (Newburger et al., 2004) The proportion of patients with coronary artery abnormalities (CAA) is increasing especially after 1999, due to a change in the definition of coronary dilatation incorporating patient body surface area, leading to identification of

patients with CAA complications that might not have been previously identified. (Belay et al., 2006)

Another risk factor for cardiac complications is delayed diagnosis, after the tenth day of onset. Delayed diagnosis is associated with more days of fever, rash, conjunctivitis and oral changes. Patients diagnosed after the tenth day were also more likely to have a higher platelet count and coronary aneurysms. (Anderson, Todd & Glode, 2005) Anderson et al. reviewed patient discharge records in a Colorado Children's Hospital 1994-2000 and found that 30% of patients were diagnosed after day 10 of illness. The study found delayed diagnosis was not associated with age, gender, type of physician or the number of days between onset and first medical visit. The group hypothesized that patients with delays in diagnosis presented with the usual symptoms of KS but over a longer period of time with the clinical diagnostic criteria not being met until day 9 for many. The most common diagnoses at time of first medical visit were streptococcal pharyngitis, otitis media and viral syndrome.

Etiology

No single infectious cause of KS has been identified as microbiologic testing have all been negative in patients with KS. One theory is that an infectious agent is involved, given a seasonal peak in winter/spring months, the occurrence of epidemics, peak incidence in the toddler age group with younger children and adults only rarely involved and the similarity in clinical features between KS and other infectious diseases such as scarlet fever and adenovirus. Vincent et al. (2007) hypothesized an association with *Yersinia pseudotuberculosis* given higher incidences of KS in populations with higher risk of exposure to *Y. pseudotuberculosis*.

KS may be the result of an immune-related response or susceptibility. The vasculitis caused by KS is associated with immunoregulatory changes that may be related to a proinflammatory cytokine response which are elevated during the acute phase. There is a related theory that a bacterial toxin acting as a superantigen triggers KS, including *Staphylococcus aureus* or *Streptococcus pyogenes*. Other studies have looked at major histocompatibility complex associations given the increased incidence in children of Asian ancestry, however a genetic association has not been shown. (Saulsbury, 2005)

Efforts to associate KS with an environmental source such as a drug or a pollutant have not been successful. Newburger et al. (2004) noted clinical similarities between KS and acrodynia (mercury hypersensitivity). In a 5-year study of hospitalized patients in San Diego County, Bronstein et al. (2000) found incidence of KS inversely associated with monthly temperature and positively associated with average monthly precipitation. Associations of KS with a prior respiratory infection and carpet-cleaning fluids have also not been confirmed. KS has also been investigated in association with preexisting eczema, using a humidifier, and residence near a standing body of water. (Newburger et al., 2004)

Treatment

Significant progress has been made in understanding the natural progression of the disease and development of therapeutic interventions to slow the immune-mediated damage to the arterial wall. Intravenous immunoglobulin (IVIG) therapy and aspirin have lowered the rate of coronary artery aneurysms from 20% in untreated patients to 3-4%. IVIG reduces the fever and the inflammatory response, and is effective in reducing aneurysms already present. American Heart Association guidelines recommend that treatment be started before the tenth day of illness and preferably before

the seventh day. Aspirin is also administered in anti-inflammatory (high) dosages until the resolution of the fever, then is reduced to provide an antiplatelet effect during thrombocytosis. (Saulsbury, 2005)

The AHA recommends echocardiographic evaluation at the time of diagnosis, at 2 weeks, and at 6 to 8 weeks after onset of illness for uncomplicated cases. Children at higher risk, i.e. those with coronary abnormalities, will need more frequent evaluation to guide their management.

Prognosis

The Japanese Ministry of Health has established a registry of an estimated 6,500 children with KS who will be evaluated longitudinally. The registry has not yet attributed any excess mortality to KS after the acute phase. (Burns et al., 2000) While knowledge about long-term cardiac function is not available, children without known cardiac complications during their first month after onset of KS appear to return to their usual good health without signs or indications of cardiac difficulty. (Newburger et al., 2004)

Surveillance

KS is a reportable condition in California but is not nationally notifiable. Since 1976, CDC has used hospital discharge data, a voluntary reporting system and special studies to better describe the epidemiology of KS in the U.S. Under reporting is a concern as a result. A San Diego County study reviewed hospital discharge data for two years for cases who met CDC case criteria and for reporting to local, state and CDC public health databases. Of 58 cases identified in the two-year period, only 37 (63.7%) were reported to local public health and the State. None of the cases in this study period were reported to the CDC. (Bronstein, Besser & Burns, 1997)

California data

KS is a reportable condition in CA. Chang (2002) reviewed CA hospital discharge data from 1995-1999 covering 2,325 patients. The male-to-female ratio was 1.62. The median age was 30 months, with a peak in incidence in the second year of life. The annual incidence in children <5 years old in 1995-1996 (15.3) increased by 30% in 1997-1998. Asians had the highest incidence of 35.3 cases per 100,000 children <5 years old. The number of cases peaked in March and were lowest in September. No association was found between incidence and temperature or precipitation, average family size, proportion of Asians in the population, population density or whether the county is in northern or southern California. The median length of stay in the hospital was 2 days. Between 2002 and 2006, CA reported 1,101 cases with an average of 220.2 cases per year. In 2006, 290 cases were reported in CA for an incidence rate of 0.8 per 100,000 population. (California Department of Public Health)

San Bernardino County data

In 2001, a preventive medicine resident assigned to the Department of Public Health reviewed hospital records of KS patients discharged from two large county hospitals from 1996-2001. Of 141 cases, 110 met CDC diagnostic criteria or the definition of an atypical case. Over the 5 year study period an average of 30% had cardiac complications. The resident also found a male predominance (1.4 to 1), mean ages ranging from 3.3 to 5.1 years and more cases in Asian children. Of the 110 cases, only 24 had been reported to Public Health as required by CCR 2500. (Gandhi, 2001)

From 2002-2006, 33 county residents were reported as having KS. The number of cases reported each year ranged from 0 to 11 with an average of 6.6 cases per year. The most common race/ethnicity reported were Hispanic (48.4%), followed by Whites (33.3%). Ages at onset ranged from under 1 year of age to 11 years with an average age of 3.0 years.

Males were more commonly reported (57.5%) than females (42.4%), although in 2002 males accounted for only 25% of cases. A majority (42.4%) of the 33 cases were reported in January, February or March.

In 2006 the Department received 24 investigations of which 19 were illnesses among county residents. Of the 19 investigations, 11 subsequently met CDC case criteria. The cases ranged in age from 3 months to 11 years with 81.8% under the age of 5 years. Consistent with reports of a seasonality to onsets, 7 of the cases had onsets in late winter; December (1), January (3) and February (3). As described in the literature, there were more males (72.7%) than females reported. The majority of cases were Hispanic (72.7%), followed by White (18.1%) and Filipino (9.0%).

The majority of 2006 cases reported multiple healthcare provider visits before diagnosis. The number of visits ranged from 1 to 3 with an average of 1.6. The most common prior diagnosis was scarlet fever. The number of days between onset of illness and admit to a hospital was 3 to 15 with an average of 7 days. The 11 cases were hospitalized for an average of 3.2 days with a range of 1 to 8 days.

Four of the 11 2006 cases were found to have cardiac complications including coronary aneurysm (2), left coronary artery dilation (1) and left ventricular hypertrophy (1).

No deaths due to KS were reported in 2006, however two separate deaths related to KS were reported in 2005 by the San Bernardino County Coroner's office. On autopsy the office found evidence of aneurysms and myocardial infarction in both children. One child, aged 4 months, had been previously diagnosed with KS one month earlier, and was being followed by a local provider. The case had not been reported to Public Health by the hospital. The other child, aged 17 months, had not been diagnosed with KS but had a history of fever and rash nine months previously and was diagnosed as having an upper respiratory infection.

Conclusion

KS is a major cause of cardiac complications in children. Long-term follow-up is needed of patients 30 and 40 years after onset to further describe late cardiovascular sequelae. Additional research is needed on the role genetics may play in patient susceptibility, and prospective trials of newer anti-inflammatory and thrombolytic therapies. Also needed is the development of a diagnostic test that could identify these patients based on their inflammatory damage, new molecular methods to detect an agent if any, and additional post mortem studies of artery pathology in fatal cases. The creation of a national registry and an improved hospital surveillance system will increase knowledge of KS and the risk factors associated with onset of illness and progression to CAA. The case definition of KS needs to be reevaluated to include newer diagnostic techniques like echocardiogram which will increase the number of atypical cases promptly recognized.

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Drug Resistant Tuberculosis

Introduction

Tuberculosis (TB) is a bacterial disease caused by *Mycobacterium tuberculosis* that can infect any part of the body, but the public's health is most impacted when TB infects the lungs or throat. TB is spread person to person when a pulmonary TB case coughs, sings, laughs or sneezes. TB is active when a person has TB bacteria in his or her sputum. When infectious, active TB cases of the lung or throat are contagious and are asked to stay home from work or school to prevent spreading TB to others. Persons who test positive for TB and have no signs or symptoms (fever, chills, night sweats, fatigue, loss of appetite, weight loss) is not considered to be active or infectious. Instead, they are considered to have a latent TB infection (LTBI). The number of TB cases in San Bernardino County have followed the national trend of a decrease in the late 1980's and subsequent increase in the early 1990's (Figure 1). The increase in cases is speculated to center around the prevalence of HIV infection. Along with the increase in cases, the number of drug resistance cases rose as well.

Treatment

Currently, there are 10 drugs approved by the United States Food and Drug Administration (FDA) for treating tuberculosis (CDC, 2003). Anti-TB medications are classified into first-line and second-line status. First-line drugs are those most commonly used for treatment and include isoniazid (INH), rifampin (RIF), ethambutol, and pyrazinamide. First-line drugs, which have been around since the 1940's are cheap and easy to administer. Second-line drugs are used when a person has a strain of TB that is resistant to one or more of the first-line drugs. Second-line drugs include streptomycin and levofloxacin which are far more expensive than first-line drugs and have additional side effects that are much more severe than those observed with first-line drugs. Active cases of TB can almost always be treated and cured. Treatment regimens for non-resistant TB are usually six months or longer because TB bacteria die slowly. Effective treatment of multi-drug resistant TB (MDR-TB) requires 18-24 months of treatment with four to six drugs (CDC, 2007).

Drug Resistance

Bacteria can change and over time develop resistance to drugs. Adherence to treatment is critical because TB bacteria die slowly. Most people will begin to feel better after a few weeks of treatment and feel that it is no longer necessary continue taking their medication. Once off medication their symptoms may return and they are compelled to take medication again. Stopping and starting treatment allows bacteria to become resistant to treatment drugs. The Centers for Disease Control and Prevention (CDC) classifies TB cases as multi-drug resistant if their *Mycobacterium tuberculosis* isolates are resistant to INH and rifampin, two powerful first-line drugs (CDC, 2003). CDC, in collaboration with the World Health Organization (WHO) and participating reference laboratories, agreed to define extensively drug-resistant tuberculosis (XDR TB) as cases of TB disease in persons whose *Mycobacterium tuberculosis* isolates were resistant to isoniazid and rifampin and at least three of the six main classes of second-line drugs (aminoglycosides, polypeptides, fluoroquinolones, thioamides, cycloserine, and para-

aminosalicylic acid) (CDC, 2003). While treatment with first and second-line drugs cure 95% and 70% of cases respectively, XDR cases are estimated to be cured 30% of the time (CDC, 2007). Tuberculosis usually needs to be treated with at least 4 effective drugs. With XDR there are not 4 drugs remaining and patients are left with treatment options that are much less effective and consequently have worse treatment outcomes.

Drug resistance in San Bernardino County

With the resurgence of TB in the late 1980's and early 1990's in the United States, MDR TB emerged as a serious challenge to TB control (Moore et al., 1997). In the United States, there have been 49 cases of XDR TB reported between 1993 and 2006 according to the 2006 World Health Organization Emergency Task Force on XDR TB definition. Eleven (22%) of those cases were in California (Figure). There have been no cases of XDR in San Bernardino County reported. In the period between 1993 and 2006 there have been seven MDR TB cases (Figure 2). Prior to 2006, there were no MDR TB cases reported in San Bernardino County since 2001. MDR and XDR tuberculosis cases may have existed before 1993, however, there was no laboratory technology to confirm them. Now countries have improved laboratories and have the capacity to test for drug resistance and subsequently report more cases.

Risk of getting MDR

The risk of getting any form of TB depends on how severe the case of TB is, how long the person was exposed to the case and the airflow. Persons on a long flight with an active TB case are at greater risk of becoming infected than people on shorter flights. Drug resistant TB, both MDR and XDR is more common in people who do not take all of their medicine as prescribed, develop active TB after having been treated for TB in the past, come from a country where drug resistance is common, or have been in contact with an active drug resistant TB case. Per the CDC, the risk of acquiring XDR TB in the United States appears to be relatively low. However, it is important to acknowledge the ease at which TB can spread. "As long as XDR TB exists, the United States is at risk."

Figure 1. Incidence and Number of Cases in San Bernardino County and California.

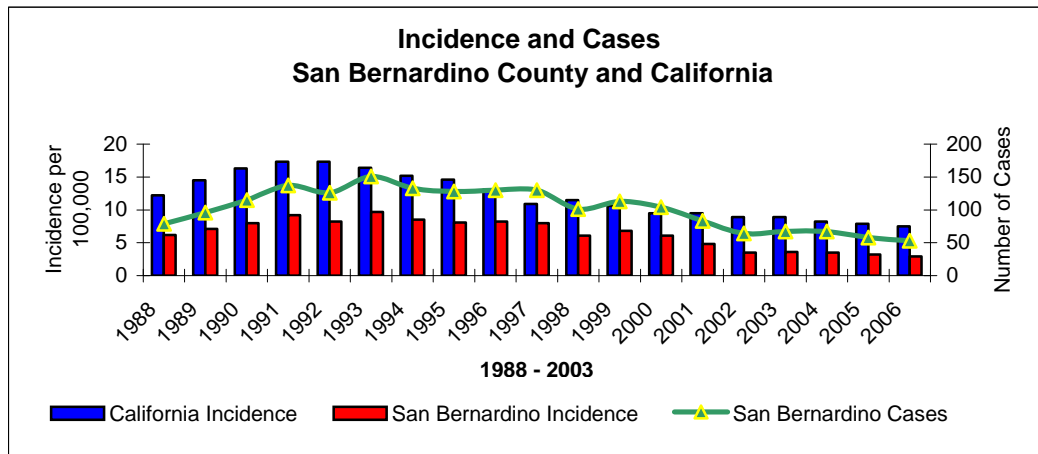
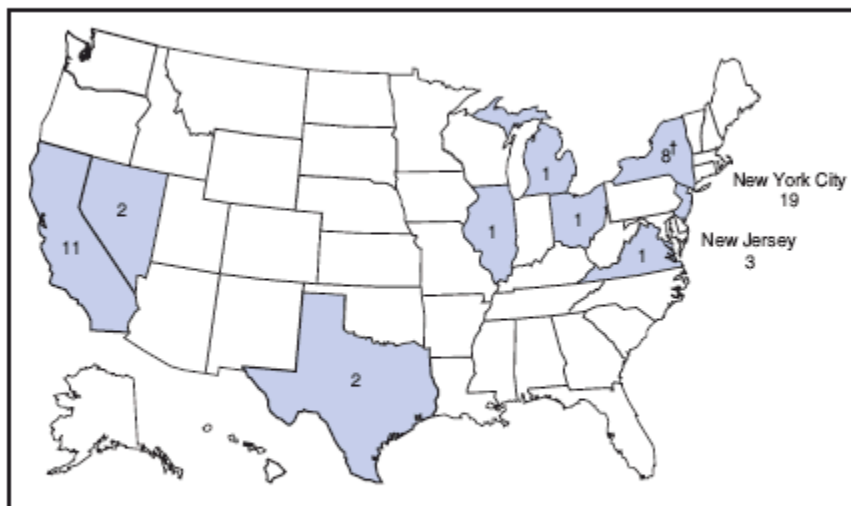


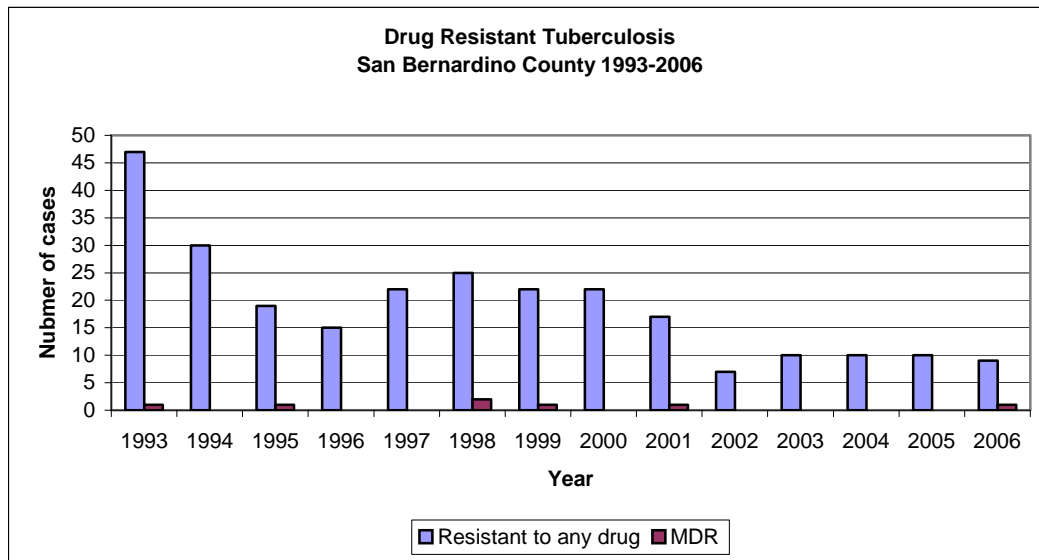
FIGURE. Number of reported cases of extensively drug-resistant tuberculosis (XDR TB)* — United States, 1993–2006



* XDR TB defined as resistance to at least isoniazid, rifampin, any fluoroquinolone, and at least one second-line injectable drug (kanamycin, amikacin, or capreomycin).

† Excludes New York City.

Figure 2. Drug Resistance in San Bernardino County 1993-2006.



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Appendices

A. Healthy People 2010 Progress Report

B. 2006 Outbreaks of Illness

C. List of Reportable Diseases and Conditions

D. California Department of Finance Population Estimates 2005-2006

E. Footnotes

F. Data Sources

San Bernardino County Reported Communicable Diseases 2006

Appendix A: Healthy People 2010 Progress Report

Comparison of Progress toward Healthy People 2010 Goals for Selected^a Reportable Diseases, San Bernardino County and California

Reportable Disease Rates in 2006			
Reportable Disease	San Bernardino County	California	HP 2010 Goal
AIDS	7.8 per 100,000 population*	5.7 per 100,000 population*	1.0 per 100,000 population
Campylobacteriosis	4.8 per 100,000 population	12.4* per 100,000 population*	12.3 per 100,000 population
<i>E. coli</i> O157:H7 Infection	0.3 per 100,000 population	0.7 per 100,000 population	1.0 per 100,000 population
Gonorrhea	106.8 per 100,000 population*	90.2 per 100,000 population*	19.0 per 100,000 population
Hepatitis A	1.3 per 100,000 population	2.7 per 100,000 population	4.5 per 100,000 population
Hepatitis C Acute	0.2 per 100,000 population	0.1 per 100,000 population	1.0 per 100,000 population
Listeriosis	0.2 per 100,000 population	0.3 per 100,000 population*	0.25 per 100,000 population
Lyme	0 cases	0.2 per 100,000 population	9.7 per 100,000 population
Measles (Rubeola)	0 cases	6 cases*	0 cases
Meningococcal Infection	0.4 per 100,000 population	0.5 per 100,000 population	1.0 per 100,000 population
Mumps	1 cases*	31 cases*	0 cases
Rubella, Any	0 cases	3 cases*	0 cases
Salmonellosis	12.2 per 100,000 population*	13.2 per 100,000 population*	6.8 per 100,000 population
Syphilis, Congenital	0 cases	11.9 per 100,000 population*	1.0 per 100,000 population
Syphilis, Primary & Secondary	1.3 per 100,000 population*	4.9 per 100,000 population*	0.2 per 100,000 population
Tetanus (< 35 yrs)	0 cases	11 cases*	0 cases
Tuberculosis	2.9 per 100,000 population*	7.4 per 100,000 population*	1.0 per 100,000 population

* Denotes indicators that do not meet or exceed HP 2010 goal.

^a Selected diseases consist of those that are included in this report for which HP 2010 comparison can be made to local indicators produced from existing and available data.

San Bernardino County Reported Communicable Diseases 2006

Appendix B: 2006 Outbreak Summaries

NON FOODBORNE OUTBREAKS					
<i>MONTH ONSET</i>	<i>ETIOLOGY</i>	<i>SITE</i>	<i># OF CASES</i>	<i>VEHICLE</i>	<i>MODE</i>
January	Varicella	Prison	3	Respiratory	Person to person
January	Norovirus	SNF*	14	Unwashed hands patients and staff	Person to person
February	Norovirus	SNF*	80	Unwashed hands patients and staff	Person to person
March	Norovirus	SNF*	97	Unwashed hands patients and staff	Person to person
May	Norovirus	SNF*	11	Unwashed hands patients and staff	Person to person
May	Norovirus	SNF*	21	Unwashed hands patients and staff	Person to person
September	Gastroenteritis	SNF*	16	Unwashed hands patients and staff	Person to person
October	Norovirus	Institution	11	Unwashed hands patients and staff	Person to person
November	Pseudomonas	Private home	9	Inadequately disinfected spa	Contact with spa water
November	Norovirus	SNF*	87	Unwashed hands patients and staff	Person to person
November	Norovirus	SNF*	60	Unwashed hands patients and staff	Person to person
November	Norovirus	SNF*	19	Unwashed hands patients and staff	Person to person
November	Norovirus	Hospital/SNF*	14	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	27	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	31	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	28	Unwashed hands patients and staff	Person to person
December	Norovirus	SNF*	23	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	15	Unwashed hands patients and staff	Person to person
December	Norovirus	SNF*	25	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	50	Unwashed hands patients and staff	Person to person
December	Gastroenteritis	SNF*	35	Unwashed hands patients and staff	Person to person

San Bernardino County Reported Communicable Diseases 2006

Appendix B: 2006 Outbreak Summaries

FOODBORNE OUTBREAKS					
<i>MONTH</i>	<i>ETIOLOGY</i>	<i>SITE</i>	<i># OF CASES</i>	<i>VEHICLE</i>	<i>CONTRIBUTING FACTORS</i>
January	Botulism	Private home	2	Canned carrots	Inadequate canning procedures; inappropriate containers; insufficient reheating
January	<i>C. perfringens</i> (suspect)	Senior center	34	Rice, beans	Inadequate holding temperature; food prepared too far in advance; insufficient reheating
February	Gastroenteritis	Gov't agency (potluck)	38	Unknown	Foods left at room temperature; inadequate holding temperatures; insufficient reheating
February	Norovirus	Restaurant	6	Unknown	Handwashing
February	Norovirus	Fast food	6	Unknown	Handwashing
March	Norovirus	Restaurant	18	Pork, plum sauce	Handwashing; possible contaminated ingredient
March	Norovirus	Country club	23	Unknown	Handwashing
April	Gastroenteritis	High school track meet	16	Unknown	Unknown
July	Norovirus	Lake	14	Watermelon	Handwashing
September	Gastroenteritis	School	6	Milk	Inadequate holding temperature; storage in contaminated environment
September	Gastroenteritis	Church	13	Unknown	Preparing food too far in advance; inadequate holding temperature
November	Gastroenteritis	Fast food	5	Chicken wrap	Contact by ill foodhandler

San Bernardino County Reported Communicable Diseases 2006

Appendix C: Reportable Diseases and Conditions

COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC HEALTH

799 East Rialto Avenue, San Bernardino, CA 92415-0011
(909) 383-3050 (909) 386-8325 FAX



REPORTABLE COMMUNICABLE DISEASES AND CONDITIONS

CALIFORNIA CODE OF REGULATIONS

Section 2500, 2641.5-2643.20

Reporting to the Local Health Authority

Acquired Immune Deficiency Syndrome (AIDS)

(HIV Infections only: see "Human Immunodeficiency Virus")

Amebiasis ♦

Anthrax*

Avian Influenza (human)*

Babesiosis ♦

Botulism (Infant, Foodborne, Wound)*

Brucellosis*

Campylobacteriosis ♦

Chancroid

Chickenpox (only hospitalization and death) ♦

Chlamydial Infections, incl Lymphogranuloma Venereum (LGV)

Cholera*

Ciguatera Fish Poisoning*

Coccidioidomycosis

Colorado Tick Fever ♦

Conjunctivitis, Acute Infectious of the Newborn,

Specify Etiology ♦

Creutzfeldt-Jakob Disease (CJD) and Other Transmissible

Spongiform Encephalopathies (TSE)

Cryptosporidiosis ♦

Cysticercosis or Taeniasis

Dengue*

Diarrhea of the Newborn, Outbreaks*

Diphtheria*

Domoic Acid Poisoning (Amnesic Shellfish Poisoning)*

Ehrlichiosis

Encephalitis, Specify Etiology: Viral, Bacterial, Fungal, Parasitic ♦

Escherichia coli: Shiga Toxin Producing (STEC) incl *E coli O157**

Foodborne Disease ♦ ♦

Giardiasis

Gonococcal Infections

Haemophilus influenzae, Invasive Disease ♦

Hantavirus Infections*

Hemolytic Uremic Syndrome*

Hepatitis, Viral

Hepatitis A ♦

Hepatitis B, (Specify acute case or chronic)

Hepatitis C (Specify acute case or chronic) See Note

Hepatitis D (Delta)

Hepatitis, Other Acute

Human Immunodeficiency Virus (HIV) (§2641-2643)

Influenza deaths (Report patients less than 18 years of age)

Kawasaki Syndrome (Mucocutaneous Lymph Node Syndrome)

Legionellosis

Leprosy (Hansen Disease)

Leptospirosis

Listeriosis ♦

Lyme Disease

Malaria*

Measles (Rubeola)*

Meningitis, Specify Etiology: Viral, Bacterial,

Fungal, Parasitic*

Meningococcal Infections*

Mumps

Paralytic Shellfish Poisoning*

Pelvic Inflammatory Disease (PID)

Pertussis ♦ (Whooping Cough)

Plague, Human or Animal*

Poliomyelitis, Paralytic ♦

Psittacosis ♦

Q Fever ♦

Rabies, Human or Animal*

Relapsing Fever ♦

Rheumatic Fever, Acute

Rocky Mountain Spotted Fever

Respiratory Syncytial Virus (RSV) ∞

Rubella (German Measles)

Rubella Syndrome, Congenital

Salmonellosis ♦ (Not Typhoid Fever)

Scombroid Fish Poisoning*

Severe Acute Respiratory Syndrome (SARS)*

Shiga Toxin (detected in feces)*

Shigellosis ♦

Smallpox (Variola)*

Staphylococcus aureus Infections, Severe* ♦

Streptococcal Infections ♦ (Outbreaks of any type

and individual cases in food handlers and

dairy workers only)

Syphilis ♦

Tetanus

Toxic Shock Syndrome

Toxoplasmosis

Trichinosis ♦

Tuberculosis ♦

Tularemia*

Typhoid Fever, (Specify acute case or carrier) ♦

Typhus Fever

Vibrio Infections ♦

Viral Hemorrhagic Fevers* (e.g., Crimean-Congo,

Ebola, Lassa, and Marburg viruses)

Water-associated Disease ♦ (e.g., Swimmers Itch and

Hot Tub Rash)

West Nile Virus (WNV) Infections ♦

Yellow Fever*

Yersiniosis ♦

San Bernardino County Reported Communicable Diseases 2006

Appendix C: Reportable Diseases and Conditions

Section 2500, 2641-2643. Reporting (cont'd)

Occurrence of Any Unusual Disease * - a rare disease or emerging disease or syndrome of uncertain etiology which could possibly be caused by a transmissible infectious agent or microbial toxin.

Outbreak of Any Disease* - occurrence of cases of a disease above the expected level over a given amount of time, in a geographic area or facility, or in a specific population group, including diseases not listed in Section 2500.

Note: Guidelines for Reporting Hepatitis C:- Report all HCV positive RIBA tests; all HCV RNA positive tests (e.g. NAT); all HCV genotype reports; and anti-HCV reactive by a screening test (e.g., EIA or CIA) at or above the S/CO ratio or index value predictive of a true positive.

- * To be reported immediately by telephone.
- ⬠ To be reported by mailing a report or by telephoning within one (1) working day of identification of the case or suspected case. All other conditions are to be reported within seven (7) calendar days from the time of identification.
- ◆ When two (2) or more cases or suspected cases of foodborne disease from separate households are suspected to have the same source of illness, they should be reported immediately by telephone.
- § HIV infection became reportable by name April 17, 2006 by Health and Safety Code Section 121022. For additional information on reporting HIV infection, see www.dhs.ca.gov/aids/hivreporting or call the San Bernardino County HIV/AIDS Program at (909) 383-3060.
- ∞ RSV became reportable on November 13, 2002 in San Bernardino County.
- ✧ Severe infections due to MRSA or MSSA in a previously healthy person that resulted in ICU admission or death became reportable on 02/13/2008. A previously healthy person is defined as one who has not been hospitalized or had surgery, dialysis or residency in a long-term care facility in the past year and did not have an indwelling catheter or percutaneous medical device at the time of culture.

IDB/DHS Effective 02/13/2008

Section 2505 and 2612. Notification by Laboratories. Laboratories are to report the following diseases:

Acid Fast Bacillus (AFB)⬠	Human Immunodeficiency Virus (HIV) §
Anthrax*	<i>Legionella</i> ⬠ (antigen or culture)
Avian Influenza*	<i>Listeria</i> ⬠
<i>Bordetella pertussis</i> , by culture or molecular ID⬠	Malaria ⬠
<i>Borrelia burgdorferi</i> ⬠	Measles (Rubeola), acute infection, by IgM antibody test or positive viral antigen test⬠
Botulism*	<i>Mycobacterium Tuberculosis</i> ⬠
Brucellosis*	<i>Neisseria meningitidis</i> ⬠ (sterile site)
<i>Burkholderia pseudomallei</i> and <i>B. mallei</i> *	Plague, animal or human*
Chlamydial infections incl. Lymphogranuloma	Rabies, animal or human⬠
Venereum (LGV)⬠	Respiratory Syncytial Virus (RSV) ∞
Cryptosporidiosis⬠	Rubella acute by IgM or culture⬠
<i>Cyclospora cayetanensis</i> ⬠	<i>Salmonella</i> ⬠
Diphtheria⬠	Shiga Toxin ⬠ (detected in feces)
Encephalitis, Arboviral⬠	<i>Shigella</i> sp⬠
<i>Escherichia coli</i> 0157:H7 (STEC) infection⬠ (see Shiga Toxin)	Smallpox*
Gonorrhea⬠	Syphilis⬠
<i>Haemophilus influenzae</i> ⬠ (sterile site)	Tuberculosis
Hepatitis A, acute infection, by IgM antibody test or positive viral antigen test⬠	Tularemia*
Hepatitis B, acute infection by IgM anti-HBc antibody test⬠	Typhoid⬠
Hepatitis B, surface antigen positivity (specify gender)⬠	<i>Vibrio</i> species infections⬠
Hepatitis C⬠ See Note	Viral Hemorrhagic Fever agents*
	West Nile Virus (WNV), Infections⬠

San Bernardino County Reported Communicable Diseases 2006

Appendix C: Reportable Diseases and Conditions

REPORTABLE DISEASES AND CONDITIONS

California Code of Regulations

HOW TO REPORT: Extremely urgent conditions (i.e., anthrax, botulism, cholera, dengue, diphtheria, plague and rabies) should be reported by telephone immediately, 24 hours a day. Other urgent conditions should be reported by telephone during regular business hours. Non-urgent conditions may be reported by telephone or mail on confidential morbidity report (CMR) forms. These forms must be filled out completely. All of the requested information is essential, including the laboratory information for selected diseases on the front of the form. All telephone and mailed reports are to be made to the Epidemiology Program in San Bernardino.

County of San Bernardino Department of Public Health
799 East Rialto, San Bernardino, CA 92415-0011
(909) 386-8325 FAX (909) 356-3805 Night and Weekend Emergency
Epidemiology and Bioterrorism Preparedness Program (909) 383-3050
Tuberculosis Control Program (909) 383-3287
STD/HIV Program (909) 383-3060

ORDERING CMRs: For the reporting of non-urgent conditions we will supply CMRs to all providers wishing to utilize them. Once or twice weekly you may insert all accumulated CMRs into an envelope and mail them. For a copy of the CMR form, contact the Epidemiology and Bioterrorism Preparedness Program at (909) 383-3050.

ANIMAL BITE: Animal bites by a species subject to rabies are reportable in order to identify persons potentially requiring prophylaxis for rabies. Additionally, vicious animals are identified and controlled by this regulation and local ordinances (California Code of Regulations, Title 17, Sections 2606, et seq.; Health and Safety Code Sections 1900-2000). Reports can be filed with the local animal control agency or the County Animal Control Office at 1-800-472-5609.

LABORATORY REPORTING: Forward a copy of the laboratory report within the specified time period. Line listings are not acceptable. Forward to the county in which the health care provider is located or to the State Health Officer if out of California. The following information should be included:

Patient Information

- Name
- Date of Birth
- Identification Number
- Address (if known)
- Telephone Number
(If known)

Specimen Information

- Result
- Date Taken
- Date Reported
- Accession Number

Provider Information

- Name
- Address
- Telephone Number

REPORTABLE NON-COMMUNICABLE DISEASES AND CONDITIONS Section 2800-2812, 2593

DISORDERS CHARACTERIZED BY LAPSES OF CONSCIOUSNESS (includes Alzheimer's Disease). A physician and surgeon shall notify the local health officer within seven (7) calendar days of every patient 14 years of age or older diagnosed with a disorder characterized by lapses of consciousness. Examples of medical conditions that this section may cover include Alzheimers disease and related disorders, seizure disorders, brain tumors, narcolepsy, sleep apnea and abnormal metabolic states, including hypo- and hyperglycemia associated with diabetes. Reporting requirements and exclusions are further defined in CCR Title 17 Division 1 Chapter 4 Sections 2800-2812.

PESTICIDE EXPOSURE: The Health and Safety Code, Section 105200, requires that a physician who knows, or who has reason to believe, that a patient has a known or suspected case of pesticide-related illness or condition, must report the case to the local health officer by telephone within 24 hours. This reporting requirement includes all types of pesticide related illnesses: skin and eye injuries, systemic poisonings, suicides, homicides, home cases, and occupational cases. **Failure to comply with the foregoing reporting requirement renders the physician liable for a civil penalty of \$250.00.** Phone reports may be made to (909) 383-3050. For occupational exposure there is an additional requirement to send the "Doctor's First Report of Occupational Injury or Illness" to the Department of Health within seven days. Copies of the report form (5021, Rev. 4/92) may be obtained from the same office for future use.

CANCER REPORTING: Certain kinds of cancer meaning all malignant neoplasms, including carcinoma in situ, which are specified in the California Cancer Reporting System Standards and the International Classification of Diseases for Oncology, shall be reported to the regional cancer registry within 30 days by physicians and surgeons, and those facilities designated as cancer reporting facilities. For additional information on cancer reporting requirements, please contact the Desert Sierra Cancer Surveillance Program at (909) 558-6170 or obtain their publication at <http://www.ccrca.org>.

San Bernardino County Reported Communicable Diseases 2005-2006

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Appendix D: California Department of Finance Population Estimates

San Bernardino County Population by Race/Ethnicity, Sex, and Age: 2006

Age	All Race/Ethnicities			White			Hispanic			Asian/Pacific Islander			Black			Native American			Multiple Race		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<1	33,324	16,999	16,325	9,180	4,678	4,502	18,546	9,465	9,081	1,601	816	785	3,141	1,603	1,538	134	68	66	722	369	353
1-4	123,995	63,336	60,659	32,280	16,454	15,826	69,500	35,522	33,978	4,852	2,496	2,356	9,900	5,053	4,847	177	93	84	7,286	3,718	3,568
5-9	151,881	77,931	73,950	41,752	21,450	20,302	81,701	41,804	39,897	6,505	3,422	3,083	15,673	8,041	7,632	736	372	364	5,514	2,842	2,672
10-14	180,365	92,620	87,745	51,048	26,263	24,785	95,616	48,941	46,675	7,825	4,104	3,721	20,316	10,504	9,812	1,107	569	538	4,453	2,239	2,214
15-19	185,995	95,472	90,523	58,354	30,006	28,348	92,324	47,143	45,181	8,437	4,479	3,958	21,566	11,126	10,440	1,160	578	582	4,154	2,140	2,014
20-24	164,407	85,051	79,356	55,406	28,462	26,944	79,290	41,186	38,104	8,609	4,507	4,102	16,700	8,751	7,949	1,044	518	526	3,358	1,627	1,731
25-29	145,443	77,391	68,052	47,710	25,855	21,855	74,091	39,462	34,629	7,546	3,844	3,702	12,712	6,457	6,255	947	520	427	2,437	1,253	1,184
30-34	136,677	68,955	67,722	41,230	21,073	20,157	73,297	37,926	35,371	8,317	3,907	4,410	11,236	4,797	6,439	744	336	408	1,853	916	937
35-39	143,015	70,881	72,134	48,057	23,874	24,183	70,453	35,913	34,540	8,595	3,973	4,622	13,296	5,872	7,424	891	417	474	1,723	832	891
40-44	147,583	72,588	74,995	58,744	28,982	29,762	62,234	31,168	31,066	8,894	4,087	4,807	14,907	7,023	7,884	1,051	506	545	1,753	822	931
45-54	265,932	130,745	135,187	128,148	63,660	64,488	89,505	44,484	45,021	17,346	8,073	9,273	25,397	11,983	13,414	2,114	972	1,142	3,422	1,573	1,849
55-64	168,971	82,637	86,334	93,912	46,886	47,026	45,438	21,848	23,590	11,516	5,298	6,218	14,501	6,933	7,568	1,428	656	772	2,176	1,016	1,160
65+	169,395	72,965	96,430	105,651	46,015	59,636	38,564	16,209	22,355	9,809	4,057	5,752	12,250	5,283	6,967	1,103	514	589	2,018	887	1,131
Total	2,016,983	1,007,571	1,009,412	771,472	383,658	387,814	890,559	451,071	439,488	109,852	53,063	56,789	191,595	93,426	98,169	12,636	6,119	6,517	40,869	20,234	20,635

San Bernardino County Population by Race/Ethnicity, Sex, and Age: 2005

Age	All Race/Ethnicities			White			Hispanic			Asian/Pacific Islander			Black			Native American			Multiple Race		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<1	31,152	15,886	15,266	5,028	2,555	2,473	20,871	10,654	10,217	1,627	827	800	2,958	1,510	1,448	143	72	71	525	268	257
1-4	114,182	58,293	55,889	24,362	12,329	12,033	68,546	35,143	33,403	5,426	2,737	2,689	10,945	5,592	5,353	400	195	205	4,503	2,297	2,206
5-9	144,324	74,231	70,093	31,128	16,227	14,901	83,769	42,893	40,876	6,599	3,417	3,182	17,420	8,954	8,466	876	414	462	4,532	2,326	2,206
10-14	171,970	88,566	83,404	30,127	15,517	14,610	105,139	54,065	51,074	8,833	4,627	4,206	22,372	11,569	10,803	1,182	581	601	4,317	2,207	2,110
15-19	180,516	92,945	87,571	39,808	20,765	19,043	101,539	51,874	49,665	11,551	6,132	5,419	22,510	11,597	10,913	1,210	600	610	3,898	1,977	1,921
20-24	158,280	84,651	73,629	35,779	19,796	15,983	90,623	47,962	42,661	10,939	5,770	5,169	16,809	9,061	7,748	998	520	478	3,132	1,542	1,590
25-29	142,725	76,216	66,509	30,643	17,259	13,384	86,395	46,109	40,286	9,939	4,912	5,027	12,757	6,372	6,385	831	454	377	2,160	1,110	1,050
30-34	145,134	71,795	73,339	29,881	14,131	15,750	88,886	45,969	42,917	11,303	5,093	6,210	12,506	5,356	7,150	786	387	399	1,772	859	913
35-39	144,814	71,906	72,908	34,999	17,179	17,820	81,637	41,956	39,681	11,349	5,187	6,162	14,325	6,370	7,955	909	445	464	1,595	769	826
40-44	142,247	70,189	72,058	43,071	21,753	21,318	68,927	34,346	34,581	11,425	5,258	6,167	15,986	7,485	8,501	1,145	555	590	1,693	792	901
45-54	243,421	119,817	123,604	98,281	49,125	49,156	93,297	46,227	47,070	21,021	9,877	11,144	25,487	12,124	13,363	2,137	992	1,145	3,198	1,472	1,726
55-64	156,254	75,867	80,387	79,225	39,622	39,603	46,470	21,951	24,519	12,734	5,871	6,863	14,354	6,823	7,531	1,470	683	787	2,001	917	1,084
65+	167,072	71,441	95,631	97,438	42,407	55,031	42,062	17,575	24,487	11,930	4,648	7,282	12,719	5,482	7,237	1,016	492	524	1,907	837	1,070
Total	1,942,091	971,803	970,288	579,770	288,665	291,105	978,161	496,724	481,437	134,676	64,356	70,320	201,148	98,295	102,853	13,103	6,390	6,713	35,233	17,373	17,860

San Bernardino County Reported Communicable Diseases 2006

Appendix E: Footnotes

- (1) To obtain a copy of the most recent AIDS Program report, please call (909) 383-3060.
- (2) Pelvic Inflammatory Disease (PID) does not include chlamydial PID or gonococcal PID, which are shown separately under chlamydia and gonorrhea respectively. PID cases for which the etiologic agent is determined to be *Chlamydia trachomatis* or *N. gonorrhoeae* are included in the total number of cases of chlamydia and gonorrhea, respectively.
- (3) Diagnosis of cholera is confirmed by isolating *Vibrio cholerae* from feces, and is distinguished from isolation of other *Vibrio* species that also cause gastrointestinal disease and are counted as *Vibrio* Infections in this report. In 2006, there were two non-cholera cases due to *V. parahaemolyticus* and *V. cholerae non-01* reported.
- (4) Midway through 1992, penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was no longer tested for in the Public Health Department Laboratory and are thus no longer tallied as a separate category.
- (5) Effective June 12, 2007 invasive *Haemophilus influenzae* occurring in patients 15 years of age and older is no longer a reportable condition.
- (6) Effective December 1, 1998, individuals with hepatitis C antibody who do not meet the criteria to be reported as hepatitis C acute, are to be reported as hepatitis C chronic, at the request of the California Department of Health Services.
- (7) This category of bacterial meningitis does not include *Neisseria meningitidis*, which is reported separately as meningococcal meningitis or meningococemia.
- (8) Meningococcal disease includes both meningococcal meningitis and meningococemia, regardless of the *N. meningitidis* serogroup.
- (9) US data for 2006 was not available at the time this report was published.
- (10) Deleted from the nationally notifiable disease list in 1995.
- (11) Not a nationally notifiable disease.
- (12) Became a California notifiable disease in 1993.
- (13) Became a nationally notifiable disease in 1994.
- (14) Incidence rates calculated using the total number of males in the population as the denominator value.
- (15) Incidence rates calculated using the total number of females in the population as the denominator value.
- (16) Nationally notifiable disease, but data is not published in Morbidity Mortality Tables.
- (17) Became a nationally notifiable disease in 1995.
- (18) Human Immunodeficiency Virus became reportable by name on April 17, 2006.
- (19) Became a nationally notifiable disease in 2000.
- (20) Became a reportable condition in San Bernardino County in 2002.
- (21) Not a notifiable disease in California.
- (22) Became a reportable condition in San Bernardino County in 2003 and in California in 2005.
- (23) Became a nationally notifiable disease in 2004.

San Bernardino County Reported Communicable Diseases 2006

Appendix F: Data Sources

Communicable Disease (CD) Incidence Data

(For all communicable diseases except AIDS, *chlamydia*, *gonorrhea*, non-gonococcal urethritis, pelvic inflammatory disease, *Syphilis*-all stages, and tuberculosis)

San Bernardino County	<u>CD Data (1980-2006)</u> : San Bernardino County CD records. <u>Tuberculosis Data (1980-2006)</u> : San Bernardino County Tuberculosis Control Program records.
California	<u>CD Data (1990-2005)</u> : <i>Communicable Diseases in California</i> , California Department of Health Services; (2006): Direct communication with the California Department of Health Services (Provisional). <u>Tuberculosis Data (1990-2006)</u> : Direct communication with the California Department of Health Services Tuberculosis Control Branch.
United States	<u>CD Data (1991-2005)</u> : US Department of Health and Human Services. (March 30, 2007). <i>Summary of Notifiable Diseases, United States, 2005</i> . Morbidity and Mortality Weekly Report, Vol. 54, No. 53.

Sexually Transmitted Disease (STD) and AIDS Data

(For AIDS, *chlamydia*, *gonorrhea*, non-gonococcal urethritis, pelvic inflammatory disease, and *syphilis*- all stages)

San Bernardino County	<u>STD Data (1991-2006)</u> : San Bernardino County CD records. <u>AIDS Data (1991-2006)</u> : San Bernardino County AIDS Program records.
California	<u>STD Data (2006)</u> : Direct communication with the California Department of Health Services, STD Control Branch records (Provisional data). <u>HIV Data (1991-2006)</u> : California Department of Health Services Office of AIDS records.
United States	<u>STD Data (1998)</u> : US Department of Health and Human Services. (September, 1999). <i>Sexually Transmitted Disease Surveillance, 1998</i> . Centers for Disease Control and Prevention, Division of Sexually Transmitted Diseases Prevention. <u>STD Data (1999-2005)</u> : US Department of Health and Human Services. (March 30, 2007). <i>Summary of Notifiable Diseases, United States, 2005</i> . Morbidity and Mortality Weekly Report, Vol. 54, No. 53.

Population Data

San Bernardino County &

California	<u>Population Data (1990-2006)</u> : State of California (August 2007). <i>Race/Ethnic Population with Age and Sex Detail, 2000-2050</i> . Department of Finance. Available: http://www.dof.ca.gov/html/Demograp/repndat.htm .
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